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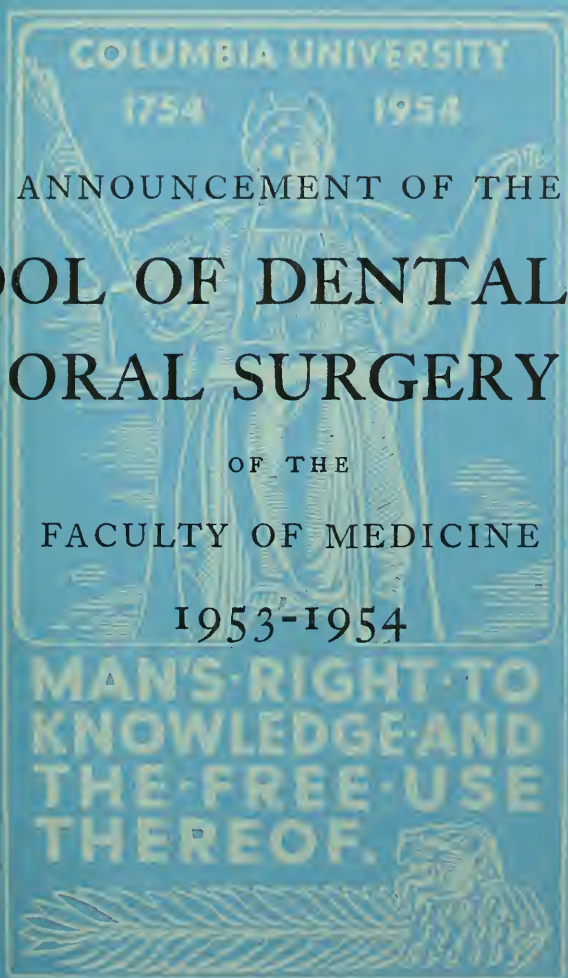
Fifty-third Series, No. 23

June 20, 1953

ANNOUNCEMENT OF THE
SCHOOL OF DENTAL AND
ORAL SURGERY

OF THE
FACULTY OF MEDICINE

1953-1954



1754 — THE BICENTENNIAL YEAR — 1954

COLUMBIA-PRESBYTERIAN MEDICAL CENTER

630 WEST 168TH STREET • NEW YORK 32, N.Y.

Columbia University Bulletin of Information

Fifty-third Series, No. 23

June 20, 1953

Issued at Columbia University, Morningside Heights, New York 27, N.Y. weekly from January for forty-six consecutive issues. Reentered as second-class matter August 15, 1952, at the Post Office at New York, N.Y., under the Act of August 24, 1912. Acceptance for mailing at a special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized.

The series includes the Report of the President to the Trustees and the Announcements of the several Colleges and Schools relating to the work of the next year. These are made as accurate as possible, but the right is reserved to make changes in detail as circumstances require. The current number of any of these Announcements will be sent upon written application to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N. Y. Copies may be obtained in person from the Office of the Secretary, 213 Low Memorial Library.

C. U. P. 6,000—1953

Communications

All communications regarding the School of Dental and Oral Surgery, applications for admission, and appointments for personal interviews should be addressed to the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.; telephone: Wadsworth 3-2500.

Announcements

The Announcements of each College or School and of the Summer Session may be obtained without charge by writing to the Office of University Admissions.

Letters requesting more detailed information than is contained in this Announcement and all correspondence regarding admission should be addressed to the Dean, School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.

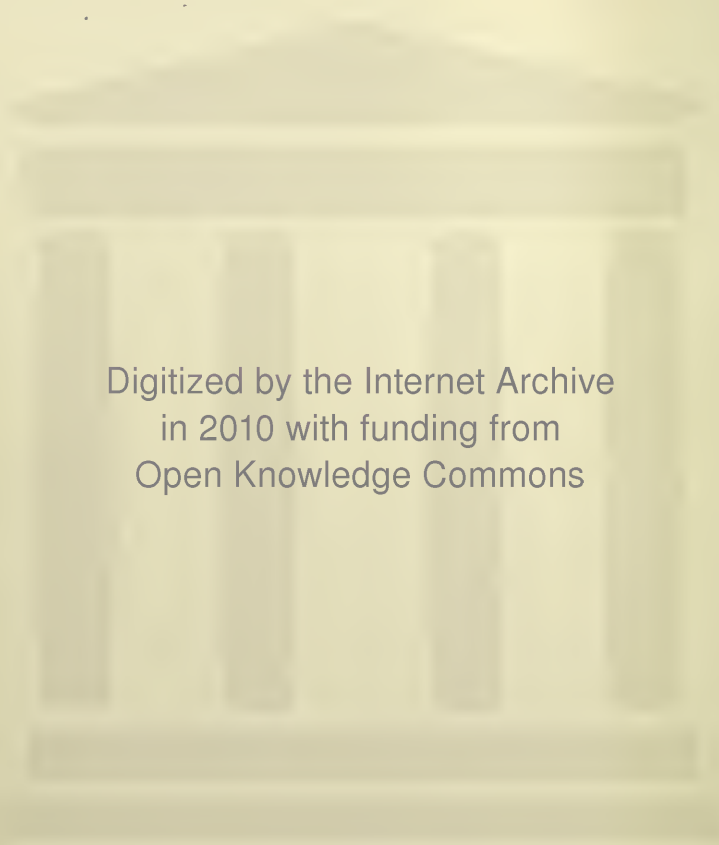
CONDENSED ACADEMIC CALENDAR

1953

- September 10 Thursday, through September 12, Saturday. Registration, including payment of fees.
- September 14 Monday. Classes begin.
- November 3 Tuesday. Election Day. Holiday.
- November 26 Thursday. Thanksgiving Day. Holiday.
- November 28 Saturday. End of first trimester.
- November 30 Monday. Beginning of second trimester.
- December 21 Monday, through

1954

- January 3 Sunday. Christmas Holidays.
- February 12 Friday. Lincoln's Birthday. Not a University Holiday.
- February 22 Monday. Washington's Birthday. Holiday.
- February 27 Saturday. End of second trimester.
- March 1 Monday. Beginning of third trimester.
Last day for filing application or renewal of application for all degrees and certificates, except doctoral degrees, to be conferred in June. The privilege of later application may be granted on payment of a late fee.
- April 11 Sunday, through April 18, Sunday. Easter Holidays.
- May 22 Saturday. Last day of classes.
- May 24 Monday, through May 28, Friday. Final examinations.
- May 31 Monday. Memorial Day. Holiday.
- June 1 Tuesday. Conferring of degrees.



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FACULTY OF MEDICINE

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AT SCHOOL OF DENTAL AND ORAL SURGERY

ANNA A. BERHOWSKY *Assistant to the Registrar*THOMAS P. FLEMING, M.S. *Librarian*

THE SCHOOL OF DENTAL AND ORAL SURGERY

Columbia University was founded in 1754 as King's College by royal grant of George II, King of England, "for the Instruction of Youth in the Learned Languages, and the Liberal Arts and Sciences." The Revolutionary War interrupted its active work, but in 1784 it was reopened as Columbia College. In 1912 the title was changed to Columbia University in the City of New York.

From its inception, the program of dental education at Columbia University has been fostered by and associated with the University's School of Medicine. The Faculty of Medicine at its stated meetings of November and December, 1915, recommended to the Trustees that a dental school be established in the University on "University Lines."

The President of the University in his annual report of 1916 informed the Trustees that "during the year a group of men have come forward with a well-supported proposal that there be established in connection with the Medical School, a school for the training of dental surgeons." The President also reported that "the project was carefully formulated and presented to the Medical Faculty and received the formal approval of that Faculty and later of the Trustees."

In May, 1916, the University issued a pamphlet entitled *A Dental School on University Lines*. In this pamphlet the University stated its intent to establish a school of dentistry in affiliation and coordination with the School of Medicine. The pamphlet's introductory statement outlined the University's policy for dental education which has been consistently followed:

"Dentistry and Dental Education are on the threshold of extraordinary development but are unable to take advantage of their opportunities because of the traditional separation of dentistry and medicine. Dentistry has been shown by recent investigation and research to be logically a branch of general medicine."

In the fall of 1917 James N. Jarvie gave a substantial sum to a fund "to found and maintain the proposed dental school of the University, described in the pamphlet entitled *A Dental School on University Lines* issued by Columbia University, May 1916."

In September, 1916, students in dentistry were admitted to courses in Columbia University at the School of Medicine. On March 5, 1917, the Trustees of the University established a school of dentistry as of September 27, 1916, and from that date the School became an integral part of the University. On March 1, 1920, the dental building adjacent to the School of Medicine and Vanderbilt Clinic was finished and assigned to the use of this School.

On July 1, 1923, the College of Dental and Oral Surgery of New York (organized in 1905) was merged with the School of Dentistry, and the combined institutions named the School of Dental and Oral Surgery of Columbia University. By this merger Columbia acquired two large buildings, at 302-306 East 35th Street and 309-315 East 34th Street, in which the School was housed up to the time of moving into the Medical Center.

The merging of the schools did not alter the University's policy for dental education. In the 1923-1924 Announcement of the School of Dental and Oral Surgery this policy was reaffirmed by the statement, "It is the purpose of the School of Dental and Oral Surgery to combine in the highest degree practicable a sound knowledge of the fundamentals of medicine with adequate training in the technical procedures of dental science and arts."

In September, 1928, the School was moved to the Columbia University-Presbyterian

Hospital Medical Center. The dental department of the School occupies three floors, a net area of forty thousand square feet. The fundamental science subjects, which are given to both dental and medical students, are taught in the adjoining College of Physicians and Surgeons, the corridors of the two schools being continuous. In adjacent wings, the halls of which are also continuous with those of the School, the wards and out-patient departments of the Presbyterian and associated hospitals are located, thus giving the closest possible contact and association with all branches of health service. The Dental School clinic includes as one of its functions the dental care of the patients of the Medical Center hospitals.

In order to strengthen the instruction of dental and medical students and to fulfill a further step in the integration of dental education and research with the medical program at the Columbia-Presbyterian Medical Center which was visualized when the Dental School was made a part of the Center in 1928, the Faculties of the two schools were merged July 1, 1945. This Faculty is responsible for the educational programs in medicine, dentistry, public health, and nursing. A committee on dental education, established by University statute, of which a majority is from the Department of Dental and Oral Surgery and of which the Associate Dean for Dental and Oral Surgery is the chairman, initiates recommendations to the Faculty on the qualifications and admission requirements for dental students, the curriculum of instruction, the candidates for the degree of Doctor of Dental Surgery, and other educational matters dealing with dentistry.

The course in dentistry covers four academic years and leads to the degree of Doctor of Dental Surgery. The greater part of the first two years of the curriculum is taken in the fundamental science departments of instruction in the University, which are integral parts of the College of Physicians and Surgeons and the School of Dental and Oral Surgery.

REQUIREMENTS FOR ADMISSION, PROMOTION AND GRADUATION

ADMISSION TO FIRST YEAR OF THE SCHOOL OF DENTAL AND ORAL SURGERY

Application.—It is desirable that candidates make application during the academic year preceding that for which they seek admission. It is not necessary to complete the academic requirements before making application. However, all requirements must be completed before matriculation. Application blanks will be furnished by the Office of the Committee on Admissions of the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application should be accompanied by a check or money order for five dollars, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable.

The minimum requirement for admission to the first-year class is the satisfactory completion of three full years at an acceptable college of arts and sciences, which must include the satisfactory completion of the following courses required by the New York State Board of Regents:

	<i>Semester Hours</i>
English composition and literature	6
Physics	6
Biology	6
Chemistry (including an approved course in organic chemistry)	12

A point or semester hour is the equivalent of one hour of lecture or recitation plus two hours of outside work or three hours of laboratory work per week, per semester. Suitable laboratory work must be included in each of the courses in science.

Inasmuch as an understanding of the biological sciences is based upon the knowledge of the underlying sciences of chemistry, physics, and biology, students are urged, so far as time permits, to take additional courses in quantitative, qualitative, physical, and organic chemistry, physics, comparative anatomy and other advanced courses in biology, as well as courses in mathematics, German and French, sociology, history, and other subjects of general cultural and scientific value. Courses in fine and industrial arts are also useful.

Owing to the limited number of students who can be accommodated, completion of the requirements for entrance does not guarantee admission. The entire college record of each student is carefully examined by the Committee on Admissions in order that those who are judged most capable of meeting the exacting demands of the course and of the profession of dentistry may be selected. Preference will be given in the selection of students to those who present to the Committee on Admissions evidence of high achievement in selected college courses of special predental value and who, in the opinion of the Committee on Admissions, are most likely to succeed in dentistry, rather than to those who present the largest number of course credits or those who have limited their preparation to the prescribed subjects. Acceptance of a student for admission is based on grounds of character and health as well as on the fulfillment of academic requirements.

An acceptance fee of \$50 is payable within ten days after notification of acceptance (see page 9).

All applicants will be required to take the Dental Aptitude Tests conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

COMBINED COURSES

Combined Courses with Columbia College.—Upon receiving ninety-four points credit, sixty-four of which must be for work in Columbia College, including all the work prescribed for the degree of Bachelor of Arts in Columbia College, a student may take studies in the first year of the School of Dental and Oral Surgery, provided he can satisfy the stated requirements and is accepted for admission therein, and will receive the degree of Bachelor of Arts from Columbia College upon the satisfactory completion of the year's work. No course may be counted toward a professional degree and at the same time be included among those which go to make up the ninety-four points referred to above.

Combined Courses with Barnard College.—Students from Barnard College may exercise the professional option after the completion of ninety points of academic work, including all grouped work and a major of twenty-eight points unless this number is reduced in individual cases by special permission of the Committee on Instruction of Barnard College.

Combined Courses with the School of General Studies.—Students from the School of General Studies may exercise the professional option after the completion of ninety-four points, including all the courses prescribed for the Bachelor of Science degree, not less than sixty-four of which have been received for work in Columbia University.

Combined Courses in Dentistry and Medicine.—It is usually possible for a graduate of a registered medical school with the degree of Doctor of Medicine to meet the requirements of the School and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one Summer Session.

ADMISSION OF FOREIGN STUDENTS

The State Department of Education has special requirements with which students who are not citizens of this country must comply. Any foreign student desiring to apply to the School of Dental and Oral Surgery should communicate with the Dean.

REGISTRATION

Before attending University courses, every student must present himself at the office of the Registrar and file a registration blank giving such information as may be required. The periods set aside for registration in each session are stated in the Academic Calendar at the beginning of this Announcement. Registration at a later date is permitted only with the written permission of the Dean, satisfactory cause for the delay having been shown.

FEES

The University Statutes provide that tuition fees and the University fee are payable semiannually in advance. No reduction is made for late registration. Registration will not be complete until such fees are paid. Checks should be drawn to the order of Columbia University and presented in person or mailed to the office of the Bursar. Payment of fees after the last day of registration (see the Academic Calendar) imposes automatically the statutory charge of \$3.00 for the privilege. Under the regulations, the privileges of the University are not available to any student until he has completed his registration.

The fees to be paid by students are subject to change at any time at the discretion of the Trustees.

The following annual fees are prescribed for dental students:

a) University Fee

1. For each Winter or Spring Session or any part thereof, for students enrolled for:

One to four points, inclusive	\$ 5.00
More than four points to nine points, inclusive	10.00
More than nine points	20.00
2. For each Summer Session or any part thereof 7.00
3. For registration as engaged in research only for any period not longer than a Winter or a Spring Session. 20.00

b) Tuition Fee

For the course in dentistry for one academic year (or equivalent) in the case of a student enrolled for the full course, payable in two installments 825.00
 For students not enrolled for the full course, fees are to be assessed by the Registrar as provided by the University Statutes.

c) Fee for Application

For a degree 20.00

d) Privileges

1. Late registration or late application for a degree or for deficiency or special examinations 3.00
2. Deficiency or special examinations 3.00
3. Renewal of application for any degree 1.00

e) Student Health Service Fee

This fee will be used to pay the annual premium of the Associated Hospital Service of New York for hospital insurance and to pay part of the cost of the student health service.

For all students, per academic year

\$25.00

f) Case Rental

For Sophomores, Juniors, and Seniors, rental for one instrument case, for one academic year, payable in two installments

5.00

g) Rebates

1. The University fee and the fee for application for any degree shall not be subject to rebate.

2. No tuition fee shall be returned for any course which the student may for any reason discontinue. Exception to this rule may be made only in cases of total withdrawal from the University, when a partial return of fees may be authorized by the Registrar.

When a rebate is allowed for the discontinuance of courses or withdrawal from the University, such rebate will be reckoned from the day upon which the Registrar receives notice from the student.

h) Undue Breakage

While no deposit is required of students to cover laboratory material and ordinary breakage, any unusual amount of breakage will be charged.

Acceptance Fee.—Within ten days after an applicant has been notified that his application has been accepted, he must notify the Dean that he intends to matriculate and accompany his communication with a check or money order for \$50, payable to Columbia University. This acceptance fee will belong to the University and if the applicant does not register at the School for the specific session, it will not be returned. If he registers at the School at the next enrollment of entering students, the amount of the acceptance fee will be deducted from his tuition fees for that session.

Fee for Processing of Application.—A fee of \$5.00 is charged to every student who applies for admission to the School of Dental and Oral Surgery or the School of Medicine. This fee covers the cost of processing the application.

Fees for Repeated Courses.—Students obliged to repeat the work for any year are required to pay the full tuition fee.

DENTAL EQUIPMENT

Instruments and Supplies.—Each student is required to supply himself with instruments as specified in the official instrument list. The purchase from the University of instruments in original package outfits has been made compulsory, and unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. The students will not be allowed to purchase more than is required to complete a case. The quantity and quality are selected with a view to the best possible results and conservation of the student's best interests.

Microscopes.—All students entering the School of Dental and Oral Surgery are required to provide themselves with microscopes of a satisfactory type. A microscope of standard make fitted with the following attachments will fill the requirements:

- a. Triple nosepiece.
- b. Abbe or variable focus condenser.
- c. 10x and 6x oculars.
- d. 16 mm. and 4 mm. objectives.
- e. Oil immersion lens.

Lockers.—Each student will be assigned a locker on entering and will be required to use a combination lock as prescribed by the School.

ESTIMATED EXPENSES

Following is an itemized estimate of the average expenses of a full-time student for an academic year in the School of Dental and Oral Surgery exclusive of travel, clothing, amusements, charity, organizations, and sundries. These items are, of course, variable but should not be overlooked in estimating the total expense. The tuition, room, board, books, and laundry figures are based upon the rates which prevailed during 1951-1952 and can be accepted as applicable in general for the year 1953-1954 unless national economic changes require their alteration.

	<i>Average</i>	<i>Minimum</i>
Tuition and University fees	\$ 865	\$ 865
Miscellaneous fees	35	35
Room	330	186
Board	600	500
Books	150	115
Instruments (see below)	350	350
Laundry	75	35
	<hr/> \$2,405	<hr/> \$2,086

These estimates are subject to correction as the basic prices of supplies and instruments change. Instruments are to be paid for at the opening of the academic year. The cost of books will vary, depending upon the choice made from the selection offered.

STUDENTS

Each person whose registration has been completed will be considered a student of the University during the session for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is registered.

Students prevented by conscientious scruples from complying with academic requirements which may be fulfilled only upon days set apart by their church for religious observance should make application to the Dean for an equitable solution.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems advisable. The disciplinary authority of the University is vested in the President in such cases as he deems

proper, and, subject to the reserved power of the President, in the dean of each faculty and the director of the work of each administrative board.

WITHDRAWAL

An honorable discharge will always be granted to any student in good academic standing and not subject to discipline who may desire to withdraw from the University; but no student under the age of twenty-one years shall be entitled to a discharge without the assent of his parent or guardian furnished in writing to the proper dean. Students withdrawing must notify the Registrar immediately.

The Dean of the School may, for reasons of weight, grant a leave of absence to a student in good standing.

REQUIREMENTS FOR PROMOTION

1. A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the class officers of instruction under whom he has studied during the preceding year.

2. The School of Dental and Oral Surgery reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions of study in the school.

Students are classified for readmission or promotion under the following headings:

I. Recommended for advancement.

II. Recommended for readmission to the same class.

III. Recommended neither for advancement nor for readmission to the same class:

a) Because of failure.

b) Because they fall under paragraph 2 of requirements for promotion.

GRADING OF STUDENTS

The following grade equivalents are used: A, excellent; B, good; C, fair; F, failure.

REQUIREMENTS FOR GRADUATION

In addition to complying with the requirements for admission and to completing the required work of the curriculum, each candidate for the degree of Doctor of Dental Surgery must present satisfactory evidence as required by law of good moral character and of having attained the age of twenty-one years. If the candidate shall have been admitted to advanced standing, he must have spent not less than four academic years or their equivalent in approved medical or dental colleges in the study of the subjects making up the curriculum of the School of Dental and Oral Surgery.

GRADUATION

Commencement occurs in June, at which time all recipients of degrees awarded during the academic year are expected to attend the exercises. Diplomas are issued in June or at various times during the year.

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work.

An application for a degree, other than the several doctoral degrees, terminates at the next regular time for the issuance of diplomas subsequent to the date of filing; but under conditions prescribed by the respective faculties it may be subject to renewal for a fee of

\$1.00 each time that a candidate chooses to come up for consideration, within a period not to exceed three years. Thereafter with the filing of a second application the regular fee of \$20 is again payable.

Dates for the filing of applications are given in the Academic Calendar at the beginning of this Announcement.

COURSES FOR DENTAL HYGIENISTS

In September, 1947, the period of training for dental hygienists was increased from one to two academic years. On October 21, 1947, the University Council approved the establishment of the degree of Bachelor of Science to be conferred upon students who, having been admitted on the basis of two years of approved college study covering not less than sixty points (including satisfactory courses in English, biological science or chemistry, and sociology or psychology), complete the course of instruction in the field of dental hygiene, consisting of two academic years of study, prescribed by the Faculty of Medicine.

Candidates for admission must be women between the ages of eighteen and thirty-five years and must present a record of good health. All candidates are required to make formal application in writing on blanks supplied by the School. After the application has been submitted, the academic record of the candidate should be sent to the School at the request of the candidate. Wherever possible, a personal interview is required before the candidate is accepted.

Applicants must satisfy the following requirements: Two years of sixty semester hours of credit in liberal arts from a college or university approved by Columbia University. The following subjects are required:

	<i>Semester Hours</i>
English	6
Biological science or chemistry	3
Sociology or psychology	3

Upon the successful completion of the two-year curriculum in dental hygiene, the Bachelor of Science degree will be conferred.

Applicants who lack not more than eight credits of the sixty credits required for admission will be considered for matriculation on the condition that the eight credits be earned during the Summer Session between the Junior and Senior years.

For further information address the Director, Courses for Dental Hygienists, 630 West 168th Street, New York 32, N.Y.

SHORT COURSES FOR GRADUATES IN DENTISTRY

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1953-1954 short refresher courses will be offered in various subjects.

Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses. For further information see the Announcement of Postgraduate Courses for Dentists, which may be obtained from the Dean, School of Dental and Oral Surgery.

CERTIFICATE OF TRAINING

The School of Dental and Oral Surgery is authorized to grant certificates of training in special branches of dentistry. The course of study for the certificate of training includes

not less than thirty credits of special work in the clinical and basic science branches of dentistry approved by the Dean. At present, an organized sixteen-month course is offered to qualified graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, orthodontics, pedodontics, and periodontology. For further information see the Announcement of Postgraduate Courses for Dentists, which may be obtained from the Dean, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University: anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable pre-dental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the Announcement of the Faculty of Pure Science, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N. Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Director, School of Public Health, 600 West 169th Street, New York 32, N.Y.

LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N.Y. All applications for admission to the examinations should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

PLAN OF INSTRUCTION

The curriculum is arranged with the object of providing the student with the necessary opportunities for acquiring a knowledge of the fundamental sciences in relation to dentistry and the techniques of approach in dental problems. Beginning in the first two academic years with a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology, the student prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skills required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of the dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by means of the division of classes into small sections, conferences, and the comprehensive case method of instruction.

CURRICULUM

1953-1954

<i>Subjects*</i>	<i>Lecture or Seminar Hours</i>	<i>Lab. or Clinic Hours</i>	<i>Total Hours</i>
FIRST YEAR			
Anatomy			
Embryology 152 F	18		18
Gross 151 FS	50	222	272
Microscopic 150 FS	42	126	168
Neuro 153 T	30	36	66
Oral 101 ST	19	82	101
Biochemistry 150 ST	38	117	155
Histology, Oral 115 ST	25	52	77
Physiology 150 FS	56	152	208
Theory and Practice			
Dental History 287 T	10		10
			1,075

* Letter following course number designates trimester: F = first, S = second, and T = third.

<i>Subjects*</i>	<i>Lecture or Seminar Hours</i>	<i>Lab. or Clinic Hours</i>	<i>Total Hours</i>
SECOND YEAR			
Crown and Bridge 105 <i>ST</i>	20	184	204
Dental Materials 126 <i>FS</i>	10	56	66
Microbiology 151 <i>F</i> and 152 <i>F</i>	43	99	142
Operative Dentistry 131 <i>FST</i>	20	187	207
Pathology 150 <i>FS</i>	54	141	195
Periodontology 151 <i>T</i>	10	44	54
Pharmacology 150 <i>ST</i>	55	33	88
Prosthetic Dentistry 157 <i>FST</i>	20	198	218
Psychiatry 150 <i>S</i>	11		11
Surgery, Principles 168 <i>ST</i>	10		10
Surgery, Oral 270A <i>ST</i>	10		10
Theory and Practice Therapeutics 286 <i>T</i>	10		10
			1,215
THIRD YEAR			
Anatomy, Applied 252 <i>S</i>	10		10
Crown and Bridge Technique 205 <i>F</i>		96	96
Clinic 206 <i>ST</i>	10	114	124
Applied Occlusal Dynamics 212 <i>T</i>		30	30
Diagnosis 212 <i>FST</i>	30	25	55
Operative Dentistry 233 <i>FST</i>	10	276	286
Orthodontics 241 <i>F</i>	20	60	80
Pathology, Oral 246 <i>FS</i>	20	60	80
Periodontology 251 <i>S</i>		30	30
Practice of Medicine 278 <i>ST</i>	40	22	62
Prosthetic Dentistry 260 <i>FST</i> and 261 <i>FST</i>	20	177	197
Radiology 267 <i>F</i>	10	15	25
Surgery, Oral 270B <i>F</i>	10	20	30
			1,105
FOURTH YEAR			
Crown and Bridge 210 <i>FST</i> and 211 <i>FST</i>	10	165	175
Diagnosis 213 <i>F</i>		25	25
Diagnosis Seminar 214 <i>S</i>		30	30
Diagnosis 215 <i>T</i> (continuation of 214)	10		10
Orthodontics 242 <i>FST</i>		30	30
Operative Dentistry 234 <i>FST</i>	20	305	325
Pedodontics 202 <i>FST</i>	10	87	97
Periodontology 252 <i>FS</i> and 253 <i>FS</i>	20	30	50
Prosthetic Dentistry 263 <i>FST</i> and 264 <i>FST</i>	10	165	175
Public Health 222 <i>S</i>	20		20
Surgery, Oral 272 <i>FST</i>	40	60	100
Surgery Seminar 274 <i>T</i>	10		10
Surgical Prosthesis 265 <i>T</i>		30	30
Theory and Practice Dental History 283 <i>F</i>	10		10
Ethics, Jurisprudence and Practice Man- agement 281 <i>FST</i>	30		30
Comprehensive 285 <i>T</i>			
			1,117

* Letter following course number designates trimester: *F* = first, *S* = second, and *T* = third.

COURSES OF INSTRUCTION

For purposes of instruction the work of each academic year is scheduled in three sessions of eleven weeks each, which are designated as First, Second, and Third Trimesters.

For a detailed statement of the content of each course, the student is referred to the departmental statements which follow.

The outline on pages 14 and 15 shows the work required of a candidate for the degree of Doctor of Dental Surgery. The University reserves the right to make such changes in the program of studies at any time as experience may prove desirable.

ANATOMY

Anatomy 101—Oral anatomy. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Anatomy 115—Oral histology and embryology. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150—Microscopic anatomy. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as *Anatomy 101F* in the Medical School.

Anatomy 151—Gross anatomy. Freshman year.

Lectures, conferences, and laboratory.

Anatomy 152—Embryology. Freshman year.

Lectures and demonstration dealing with the dynamics of vertebrate development, with particular reference to mammals and man.

Anatomy 153—Neuroanatomy. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to *Anatomy 106S* in the Medical School.

Anatomy 252—Applied anatomy of the head and neck. Junior year.

Lectures and demonstrations. A review course with special application to the problems of the major fields of dentistry.

BIOCHEMISTRY

Biochemistry 150—Introductory biochemistry. Freshman year.

Lectures and laboratory. A study of the chemistry of life processes with special reference to the animal organism.

DENTAL MATERIALS

Dental Materials 126—Physical properties of dental materials. Sophomore year.

Lectures and laboratory on the physical and chemical properties of the metals and other materials used in dentistry, with clinical applications.

DIAGNOSIS

Diagnosis 212—Dental diagnosis lectures and clinic. Junior year.

Lectures and clinical practice in diagnostic procedures, comprehensive diagnosis, pulp symptomatology, radiographic interpretation, and diagnosis of lesions and diseases of the oral cavity.

Diagnosis 213—Dental diagnosis clinic. Senior year.

Continuation of clinic of *Diagnosis 212*.

Diagnosis 214—Diagnosis seminar. Senior year.

Discussion and differential diagnosis of diseases of the oral cavity.

Diagnosis 215—Diagnosis seminar. Senior year.

Continuation of *Diagnosis 214*.

MEDICINE**Medicine 278—General survey of medicine. Junior year.**

Lectures and conferences covering phases of general medicine; also clinics in which patients are studied for conspicuous manifestations of systemic conditions and their significance.

MICROBIOLOGY**Microbiology 151—General medical microbiology and immunology. Sophomore year.**

Lectures, conferences, and laboratory.

Microbiology 152—Principles of microbiology, immunology, and epidemiology. Sophomore year.

This course is identical with *Microbiology 105F* in the Medical School except that lectures on the mouth bacteria are substituted for several of those of the medical series.

OPERATIVE DENTISTRY**Operative Dentistry 131—Elements of operative dentistry. Sophomore year.**

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233—Operative clinical practice. Junior year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234—Advanced clinical practice. Senior year.

A continuation in lectures and clinic of *Operative Dentistry 233* with the consideration of special problems in operative practice, including endodontia.

ORTHODONTICS**Orthodontics 241—Principles of orthodontics. Junior year.**

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion in orthodontics by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and constructing of removable appliances used as space maintainers and habit breakers and to correcting tooth alignment in preparation for restorative dentistry and treatment of periodontal conditions. Clinical practice in the use of appliances constructed in the laboratory.

Orthodontics 242—Orthodontic clinic. Senior year.

Clinical orthodontics.

PATHOLOGY**Pathology 150—General and special pathology. Sophomore year.**

A study of important pathological conditions, demonstrated by museum specimens and a very complete series of histological preparations.

Pathology 246—Oral pathology. Junior year.

Lectures, conferences, and laboratory work on the diseases of the jaws, mouth, and teeth.

Pathology 247—Oral pathology seminar. Senior year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS**Pedodontics 202—Pedodontics lectures and clinic. Senior year.**

Lectures and conferences on operative dental procedures for children and management of child dental patients.

PERIODONTOLOGY**Periodontology 151—Periodontia clinic. Sophomore year.**

Lectures and clinics on dental prophylactic technique and early disturbances of the periodontium.

Periodontology 251—Periodontia clinic. Junior year.

Lectures and clinics in the diagnosis and treatment of periodontal diseases.

Periodontology 252—Periodontology lectures. Senior year.

Lectures and conferences on the theory and practice of periodontology and periodontal histopathology.

Periodontology 253—Periodontia clinic. Senior year.

Work in clinics in the diagnosis and treatment of advanced periodontal diseases.

PHARMACOLOGY**Pharmacology 150—Pharmacology. Sophomore year.**

Lectures, conferences, and laboratory. In this course the pharmacological action of drugs on man and lower animals is studied.

PHYSIOLOGY**Physiology 150—Mammalian physiology. Freshman year.**

Lectures, conferences, and laboratory.

PROSTHETIC DENTISTRY**Prosthetics 105—Crown and bridge lectures and technique. Sophomore year.**

Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.

Prosthetics 157—Prosthetic lectures and technique. Sophomore year.

Lectures and technical procedures in full and partial denture construction.

Prosthetics 205—Crown and bridge lectures and technique. Junior year.

Lectures on the clinical procedures in crown and bridgework.

Prosthetics 206—Crown and bridge clinic. Junior year.

Clinical construction of elementary crown and bridgework.

Prosthetics 210—Crown and bridge lectures. Senior year.

Lectures and conferences on various types of bridgework.

Prosthetics 211—Crown and bridge clinic. Senior year.

Clinical construction of crown and bridgework.

Prosthetics 212—Applied occlusal dynamics. Junior year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260—Prosthetic lectures. Junior year.

Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.

Prosthetics 261—Prosthetic clinic. Junior year.

Clinical construction of full and partial dentures.

Prosthetics 263—Prosthetic clinic. Senior year.

Clinical construction of full and partial dentures.

Prosthetics 264—Prosthetic lectures. Senior year.

A series of lectures on clinical considerations in partial denture diagnosis, design, and construction.

Prosthetics 265—Surgical prosthesis. Senior year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

PSYCHIATRY**Psychiatry 150—Psychiatry for the dentist. Sophomore year.**

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH**Public Health 222—Principles of public health. Senior year.**

Survey course in the theory and practice of preventive medicine, dentistry, and public health. Fundamental principles of administration, statistics, epidemiology, industrial hygiene, and sanitation. The principles and problems of dental public health practice are emphasized.

RADIOLOGY**Radiology 267—Oral radiology practice. Junior year.**

Lectures, readings, and discussions on topics relative to oral radiology.
Practice in exposing, processing, and mounting dental radiographs.

SURGERY**Surgery 168—Principles of surgery. Sophomore year.**

Lectures, seminars, and basic principles of general surgery.

Surgery 270A—Oral surgery. Sophomore year.

Lectures and seminars on local anesthesia and removal of teeth.

Surgery 270B—Oral surgery. Junior year.

Demonstrations, lectures, and clinical practice in local anesthesia and the removal of teeth.

Surgery 272—Oral surgery. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia.
Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274—Oral surgery seminar. Senior year. Required.

Lectures and seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation.

THEORY AND PRACTICE OF DENTISTRY

Theory and Practice 281—Dental ethics, jurisprudence, and practice management. Senior year.

Lecture and conference course on dental ethics, jurisprudence, economics, office conduct, and practice management.

Theory and Practice 283—Dental history. Senior year.

Lecture and conference course. The development of the scientific principles of modern dentistry is discussed.

Theory and Practice 285—Comprehensive case. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of X-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 286—Therapeutics. Sophomore year.

Lectures and conferences on drugs and other therapeutic agents used in dentistry.

Theory and Practice 287—Dental history. Freshman year.

Lecture and conference course. The development of the scientific principles of modern dentistry is discussed.

TEXTBOOKS

The following list includes most of the books normally used. As a rule, only the latest editions of the textbooks should be purchased. Students are warned against buying any books until specifically advised by the departments concerned.

ANATOMY. Gross anatomy: One of the following three: Stedman, Gould, Dorland, or American, *Medical Dictionary*; Cunningham, *Manual of Practical Anatomy*, Vols. II and III; mimeographed *Dissecting Directions*; one of the following four: Grant, *Atlas of Anatomy*; Truex and Kellner, *Detailed Atlas of the Head and Neck*; Spalteholz, *Hand Atlas of Human Anatomy*; or Anson, *Atlas of Human Anatomy*.

APPLIED ANATOMY: Shapiro, *Applied Anatomy of the Head and Neck* (2d ed.).

EMBRYOLOGY: One of the following three: Arey, *Developmental Anatomy*; Hamilton, *Human Embryology*; or Patten, *Human Embryology*.

MICROSCOPIC ANATOMY: Bailey, *Textbook of Histology* (12th ed.); mimeographed laboratory manual.

NEUROANATOMY: Strong and Elwyn, *Human Neuroanatomy*; mimeographed laboratory manual.

ORAL HISTOLOGY AND EMBRYOLOGY: Orban, *Oral Histology and Embryology*; Diamond, *Dental Anatomy*.

BIOCHEMISTRY: Harrow, *Textbook of Biochemistry* (5th ed.); Karshan, *Laboratory Manual of Biochemistry for Dental Students*.

DENTAL ETHICS AND PRACTICE MANAGEMENT: McGehee and Walker, *Dental Practice Management*.

DENTAL THERAPEUTICS: Council on Therapeutics, American Dental Association, *Accepted Dental Remedies*; McGehee and Green, *Pharmacology and Pharmacotherapeutics for Dentists*.

DIAGNOSIS: Ziskin *et al.*, *Differential Diagnosis*; Ziskin, *Pulp Symptomatology* (1943 ed.); Thoma, *Oral Pathology* (3d ed.).

MEDICINE: Yater, *Fundamentals of Internal Medicine* (3d rev. ed.).

MICROBIOLOGY: Jordan and Burrows, *Textbook of Bacteriology* (15th ed.); Laboratory Manual in Microbiology and Immunology.

OPERATIVE DENTISTRY: Black, *Operative Dentistry*, Vols. II and III; *Operative Dentistry Syllabus*; Grossman, *Root Canal Therapy*.

ORAL PATHOLOGY: Thoma, *Oral Pathology* (3d ed.); or Kronfeld, *Histopathology of the Teeth* (3d ed.).

ORTHODONTICS: Salzman, *Principles of Orthodontics*.

PATHOLOGY: One of the following four: Boyd, *Textbook of Pathology*; Karsner, *Textbook of Pathology*; Moore, *Textbook of Pathology*; or *Anderson's Pathology*.

PEDODONTICS: McBride, *Juvenile Dentistry* (4th ed. or later).

PERIODONTOLOGY: Goldman, *Periodontia*.

PHARMACOLOGY: Goodman and Gilman, *Pharmacological Basis of Therapeutics* (1951).

PHYSIOLOGY: One of the following six: Wiggens, *Physiology in Health and Disease* (5th ed.); Fulton, *Textbook of Physiology* (16th ed.); Starling, *Human Physiology* (10th ed.); Best and Taylor, *Physiological Basis of Medical Practice* (1950); Bard, *Macleod's Physiology in Modern Medicine* (9th ed.); or Houssay, *Human Physiology*; and *Physiology Laboratory Manual*.

PROSTHETIC DENTISTRY: Skinner, *Science of Dental Materials*; Swenson, *Complete Dentures*; Tylman, *Crown and Bridge Prosthesis*; United States Government Printing Office, *Physical Properties of Dental Materials*; Young *et al.*, *Syllabus on Complete Dentures*.

PSYCHIATRY: Strecker, *Fundamentals of Psychiatry* (4th ed.).

RADIOLOGY: McCall and Wald, *Clinical Dental Roentgenology* (3d ed.).

SURGERY: Berger, *Principles and Technique of Oral Surgery*; Berger, *Principles and Technique of the Removal of Teeth*; Parker, *Synopsis of Traumatic Injuries of the Face and Jaw*.

SURGICAL PROSTHESIS: O. E. Beder, *Surgical and Maxillofacial Prosthesis*.

STUDENT ORGANIZATIONS

REGISTRATION OF STUDENT ORGANIZATIONS

Blanks for the registration of student organizations, other than those for which the responsibility is assumed by a faculty or department of instruction, may be obtained at the room assignment desk in the Office of the Registrar, 315 University Hall.

Such student organizations come under the jurisdiction of the Committee on Student Organizations of the University Council and may be granted the privileges of the use of names in which the name of the University is embodied or suggested and the use of University rooms or grounds for meetings and bulletin boards for announcements, only if they have filed their registration blanks, furnishing the committee with lists of officers and other executive members, statements of purposes, copies of constitutions and bylaws, and information concerning the nature of any affiliation or connection with non-University organizations.

OMICRON KAPPA UPSILON

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity, was chartered in the School of Dental and Oral Surgery in 1934. The purpose of this organization is to recognize and honor a maximum of 12 per cent of the members of the graduating Senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

THE WILLIAM JARVIE SOCIETY

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and to which Sophomores, Juniors, and Seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

FACILITIES

LIBRARY

The Medical Library occupies part of the three lower floors in the College of Physicians and Surgeons. It provides current literature (both books and journals) for faculty and students, and it aids in research through its own collections of current and historical works and through its unique bibliographic service.

The Library contains approximately one hundred and eighty thousand volumes of books and journals, some five thousand pamphlets, and about two thousand lantern slides on the history of medicine. More than twenty-two hundred periodicals are received regularly. A professional library staff is available to aid students, faculty, and research workers in the Schools of Medicine, Dentistry, Nursing, Public Health, and the hospitals of the Medical Center.

The libraries on Morningside Heights, containing more than two million volumes, are open to all students of dentistry. The main collection is housed in Butler Library; special and departmental collections are located in various other buildings on the campus. They

include collections on biology, chemistry, physics, psychology, sociology, and other subjects related to dentistry and supplement the special collections available in the Medical Library. Books may be borrowed for home use.

Leaflets describing the collections and services of the University Libraries are available in any of the library reading rooms. The Medical Library and all other libraries post their hours of opening.

UNIVERSITY PRIVILEGES

All students enrolled in the Dental School enjoy the privileges and facilities of the University campus, including access to the University libraries, Gymnasium, and other activities.

University Gymnasium.—The Gymnasium is situated on Morningside Heights and is open daily, except Sundays and holidays. Students of the School of Dental and Oral Surgery may enjoy its privileges and have the use of the Gymnasium, baths, and private lockers. A service charge for physical education, amounting to one dollar (\$1.00) per session (Winter, Spring, or Summer), is charged each student using the facilities of the University Gymnasium without formal registration in physical education courses. In addition a deposit must be made of two dollars (\$2.00) for a lock, locker, and towel.

STUDENT HEALTH SERVICE

The Student Health Service is located in Room 220, 2nd Floor, Vanderbilt Clinic. Daily office hours are held for sick students. Emergency treatment after 5:00 P.M. and on week ends may be obtained in Admitting Emergency, Vanderbilt Clinic. Students, sick at home, and living within the immediate vicinity of the Medical Center, may contact the Physician-in-Charge of the Health Service. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under a hospitalization insurance policy.

RELIGIOUS LIFE

The life of the University community finds religious expression through St. Paul's Chapel and Earl Hall and through the ministry of the Chaplain and those associated with him in his work. The Chaplain of the University is assisted by three religious counselors: the Counselor to Protestant Students, the Counselor to Roman Catholic students, and the Counselor to Jewish students.

Daily services are held in the Chapel, and students are urged to familiarize themselves with the schedules, which are conveniently posted.

There are a number of student religious organizations to which the Chaplain and counselors serve as advisers and with which students are cordially urged to affiliate themselves.

The Chaplain and the counselors are especially eager to establish warm personal relations with students and to meet them in consultation, at the Chapel or in their offices in Earl Hall.

UNIVERSITY RESIDENCE HALLS

Residence Halls Announcements and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125 Livingston Hall, Columbia University, New York 27, N.Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. The advance reservation deposit is payable upon receipt of room assignment. Checks must be made payable to Columbia University.

KING'S CROWN HOTEL

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates, available for relatives and guests of members of the University community.

INTERNATIONAL HOUSE

International House, while not a University Residence Hall, is primarily a residence for students at Columbia University and other colleges and universities in New York City. It offers comfortable accommodations at reasonable rates. For further information, write to International House, 500 Riverside Drive, New York 27, N.Y.

MEDICAL CENTER BOOKSTORE

The Medical Center Bookstore, located on the second floor of the College of Physicians and Surgeons, is maintained for the convenience of the students and staff of the Medical Center schools and hospitals. The store carries a full stock of textbooks and all other student supplies. Substantial savings are effected whenever the rules of manufacturers and publishers permit. The store is open on weekdays from 8:45 A.M. to 5:30 P.M.; Saturdays, 8:45 A.M. to 1:30 P.M.

FELLOWSHIPS, SCHOLARSHIPS, AND PRIZES

Recipients of University financial aid in excess of tuition, whether in the form of fellowships, scholarships, or other grants, will be asked to reside in the University Residence Halls unless exempted by the appropriate Dean with the approval of the President upon the presentation of adequate reasons for living elsewhere.

Three Ellis Fellowships are awarded annually to qualified graduates of any of the colleges of recognized rank in the state of Vermont. The holders of these fellowships may pursue resident graduate studies under any one of the graduate schools maintained by the University and are eligible for reappointment for no more than two additional years, with the proviso that a holder of the fellowship who is a student in medicine may be eligible for reappointment for no more than three additional years. The annual stipend is \$1,500. Applications should be submitted on or before February 20 on blanks to be filed with the Office of University Admissions.

See also "Graduate Courses in the Basic Sciences" on page 13.

The Van Woert Scholarship Fund was established by the alumni of the School of Dental and Oral Surgery in 1940. The award is given annually to a Senior student in the dental school who stands high in scholastic attainments, in personal character, and in potentiality of being a credit to Columbia University and the dental profession.

A prize known as the Ella Maria Ewell Medal is awarded annually to the student of the School of Dental and Oral Surgery who, in the judgment of the Faculty, is most proficient in some subject of dentistry.

The Alumni Association makes an annual award of the Rowe-Wiberg Medal to the Senior student who has shown the greatest proficiency in prosthetic dentistry.

An annual award is made by the Sigma Epsilon Delta Fraternity to the graduating student who, in the opinion of the Faculty, shows the greatest promise.

The staff of the Division of Operative Dentistry has established an annual prize for excellence in operative dentistry.

STUDENT LOANS

Loan funds are provided in a limited amount for the assistance of students, but it is the general policy to grant loans only to students who have satisfactorily completed at least one session of residence at the University. Application is made on a blank which may be obtained from the Office of the Bursar, 310 University Hall. Applications for loans for the Winter Session should be filed by September 15; for the Spring Session, by January 15.

STUDENT EMPLOYMENT

Owing to the heavy schedule of the Dental School, it is difficult for dental students to undertake outside part-time work during the academic year and, so far as practical, other financial arrangements should be made.

OFFICERS OF INSTRUCTION

- HAROLD A. ABRAMSON, *Assistant Clinical Professor of Physiology*; A.B., Columbia, 1920; M.D., 1923
- THOMAS H. ALLEN, *Associate Professor of Physiology*; A.B., Iowa, 1936; Ph.D., 1941
- FRANZ ALTMANN, *Associate Clinical Professor of Otolaryngology*; M.D., Vienna, 1925
- VIRGINIA APGAR, *Professor of Anesthesiology*; A.B., Mt. Holyoke, 1929; M.D., Columbia, 1933
- EDMUND APPLEBAUM, *Associate Professor of Dental Anatomy*; D.D.S., New York College of Dentistry, 1922
- HOWARD ARDEN, *Assistant Professor of Dentistry*; B.S., Fordham, 1943; D.D.S., Columbia, 1946
- HERBERT D. AYERS, JR., *Assistant Clinical Professor of Dentistry*; A.B., Columbia, 1929; D.D.S., 1931
- MARGARET W. BARNARD, *Associate Professor of Public Health Practice*; A.B., Smith, 1917; M.D., Cornell, 1923; D.P.H., Johns Hopkins, 1935
- HENRY A. BARTELS, *Assistant Professor of Oral Pathology*; B.S., Rhode Island State, 1917; B.S., Columbia, 1925; D.D.S., 1927
- HERBERT BARTELSTONE, *Assistant Professor of Pharmacology*; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945
- FRANK E. BEUBE, *Clinical Professor of Dentistry*; L.D.S., D.D.S., Toronto, 1930
- HAROLD W. BROWN, *Associate Dean (Public Health); Director, School of Public Health; Professor of Parasitology*; A.B., Kalamazoo, 1924; M.S., Kansas State, 1925; Sc.D., Johns Hopkins, 1928; M.D., Vanderbilt, 1933; D.P.H., Harvard, 1936
- JACK BUDOWSKY, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1943
- THEODORE BUNDRANT, *Assistant Clinical Professor of Dentistry*; D.D.S., Howard, 1929
- LESTER R. CAHN, *Associate Professor of Oral Pathology*; D.D.S., New York College of Dentistry, 1918
- EDWARD A. CAIN, JR., *Associate Professor of Dentistry*; B.S., Fordham, 1942; D.D.S., Columbia, 1945
- NEAL W. CHILTON, *Assistant Professor of Dental Public Health Practice*; B.S., College of the City of New York, 1939; D.D.S., New York University, 1943; M.P.H., Columbia, 1946
- LOUIS J. CIZEK, *Assistant Professor of Physiology*; B.S., Fordham, 1937; M.D., Columbia, 1941
- E. GURNEY CLARK, *Professor of Epidemiology*; A.B., Vanderbilt, 1927; M.D., 1931; M.P.H., Johns Hopkins, 1936; D.P.H., 1944
- HANS T. CLARKE, *Professor of Biochemistry*; B.Sc., London, 1908; D.Sc., 1914
- LOUIS A. COHN, *Associate Clinical Professor of Dentistry*; D.D.S., Pennsylvania, 1928
- ROBERT W. COON, *Assistant Professor of Pathology*; B.S., North Dakota, 1942; M.D., Rochester, 1944
- WILFRED M. COPENHAVER, *Professor of Anatomy*; A.B., Western Maryland, 1921; Ph.D., Yale, 1925
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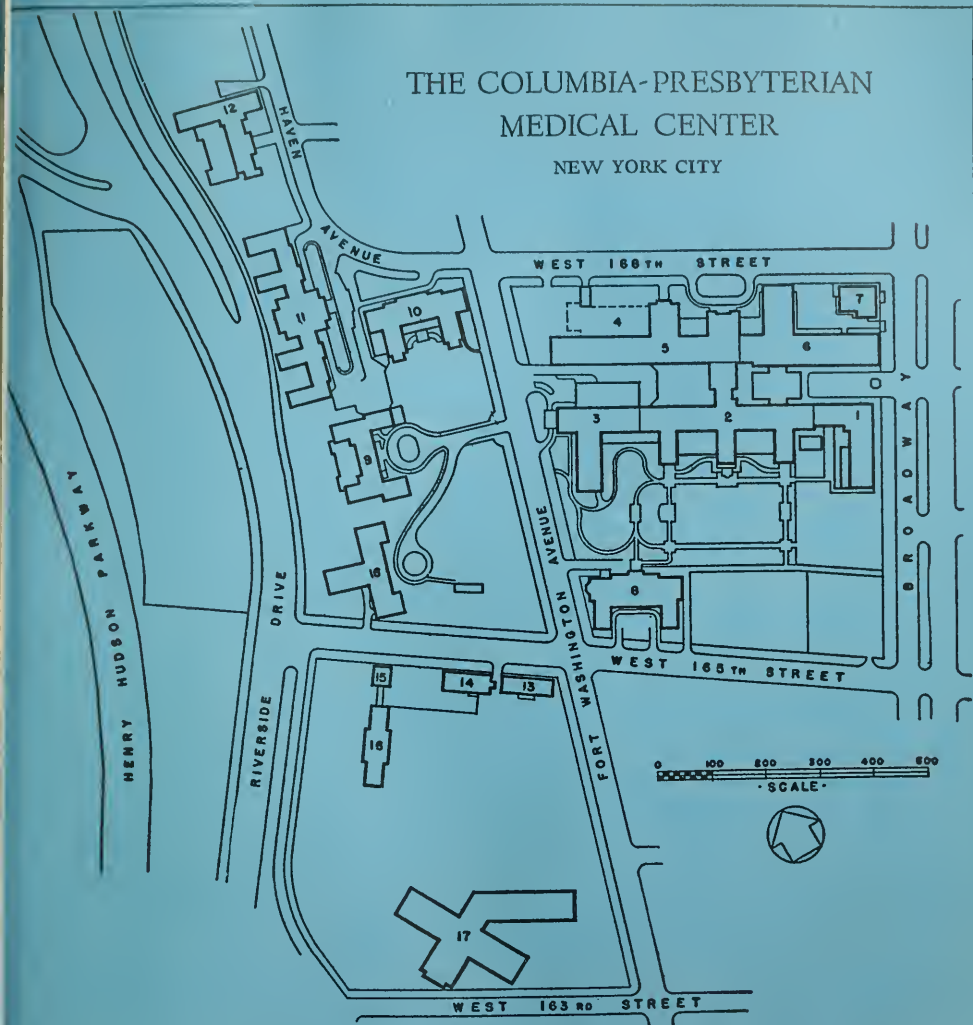
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Fifty-fourth Series, No. 26

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Columbia University Bulletin of Information

Fifty-fourth Series, No. 26

July 10, 1954

Issued at Columbia University, Morningside Heights, New York 27, N.Y. weekly from January for forty-six consecutive issues. Reentered as second-class matter August 15, 1952, at the Post Office at New York, N.Y., under the Act of August 24, 1912. Acceptance for mailing at a special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized.

The series includes the Report of the President to the Trustees and the Announcements of the several Colleges and Schools relating to the work of the next year. These are made as accurate as possible, but the right is reserved to make changes in detail as circumstances require. The current number of any of these Announcements will be sent upon written application to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N.Y. Copies may be obtained in person from the Office of the Secretary, 213 Low Memorial Library.

C. U. P. 5,100—1954

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Letters requesting more detailed information than is contained in this Announcement and all correspondence regarding admission should be addressed to the Dean, School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.

CONDENSED ACADEMIC CALENDAR

1954

- September 7 Tuesday, and September 8, Wednesday. Registration, including payment of fees.
- September 13 Monday. Classes begin.
- November 2 Tuesday. Election Day. Holiday.
- November 25 Thursday. Thanksgiving Day. Holiday.
- November 27 Saturday. End of first trimester.
- November 29 Monday. Beginning of second trimester.
- December 20 Monday, through

1955

- January 2 Sunday. Christmas Holidays.
- February 12 Saturday. Lincoln's Birthday. Not a University Holiday.
- February 22 Tuesday. Washington's Birthday. Holiday.
- February 26 Saturday. End of second trimester.
- February 28 Monday. Beginning of third trimester.
- March 1 Tuesday. Last day for filing application or renewal of application for all degrees and certificates, except doctoral degrees, to be conferred in June. The privilege of later application may be granted on payment of a late fee.
- April 3 Sunday, through April 10, Sunday. Easter Holidays.
- May 21 Saturday. Last day of classes.
- May 23 Monday, through May 27, Friday. Final examinations.
- May 30 Monday. Memorial Day. Holiday.
- June 1 Wednesday. Conferring of degrees.

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 HOUGHTON HOLLIDAY
 MAXWELL KARSHAN
 BARNET M. LEVY
 CARL R. OMAN

SOLOMON N. ROSENSTEIN
 JOSEPH SCHROFF
 GILBERT P. SMITH
 HARRY P. SMITH
 LEWIS R. STOWE
 ARTHUR C. TOTTEN
 WILLARD C. RAPPLEYE, *ex officio*
 AURA E. SEVERINGHAUS, *ex officio*

ADMINISTRATIVE STAFF

AT THE SCHOOL OF DENTAL AND ORAL SURGERY

ANNA A. BERHOWSKY, B.A., M.A. *Assistant to the Registrar*
 THOMAS P. FLEMING, M.S. *Librarian*

THE SCHOOL OF DENTAL AND ORAL SURGERY

Columbia University was founded in 1754 as King's College by royal grant of George II, King of England, "for the Instruction of Youth in the Learned Languages, and the Liberal Arts and Sciences." The Revolutionary War interrupted its active work, but in 1784 it was reopened as Columbia College. In 1912 the title was changed to Columbia University in the City of New York.

From its inception, the program of dental education at Columbia University has been fostered by and associated with the University's School of Medicine. The Faculty of Medicine at its stated meetings of November and December, 1915, recommended to the Trustees that a dental school be established in the University on "University Lines."

The President of the University in his annual report of 1916 informed the Trustees that "during the year a group of men have come forward with a well-supported proposal that there be established in connection with the Medical School, a school for the training of dental surgeons." The President also reported that "the project was carefully formulated and presented to the Medical Faculty and received the formal approval of that Faculty and later of the Trustees."

In May, 1916, the University issued a pamphlet entitled *A Dental School on University Lines*. In this pamphlet the University stated its intent to establish a school of dentistry in affiliation and coordination with the School of Medicine. The pamphlet's introductory statement outlined the University's policy for dental education which has been consistently followed:

Dentistry and Dental Education are on the threshold of extraordinary development but are unable to take advantage of their opportunities because of the traditional separation of dentistry and medicine. Dentistry has been shown by recent investigation and research to be logically a branch of general medicine.

In the fall of 1917 James N. Jarvie gave a substantial sum to a fund "to found and maintain the proposed dental school of the University, described in the pamphlet entitled *A Dental School on University Lines* issued by Columbia University, May 1916."

In September, 1916, students in dentistry were admitted to courses in Columbia University at the School of Medicine. On March 5, 1917, the Trustees of the University established a school of dentistry as of September 27, 1916, and from date the School became an integral part of the University. On March 1, 1920, the dental building adjacent to the School of Medicine and Vanderbilt Clinic was finished and assigned to the use of this School.

On July 1, 1923, the College of Dental and Oral Surgery of New York (organized in 1905) was merged with the School of Dentistry, and the combined institutions named the School of Dental and Oral Surgery of Columbia University. By this merger Columbia acquired two large buildings, at 302-306 East 35th Street and 309-315 East 34th Street, in which the School was housed up to the time of moving into the Medical Center.

The merging of the schools did not alter the University's policy for dental education. In the 1923-1924 Announcement of the School of Dental and Oral Surgery this policy was reaffirmed by the statement, "It is the purpose of the School of Dental and Oral Surgery to combine in the highest degree practicable a sound knowledge of the fundamentals of medicine with adequate training in the technical procedures of dental science and arts."

In September, 1928, the School was moved to the Columbia University-Presbyterian

Hospital Medical Center, where the dental department of the School occupies three floors. The fundamental science subjects, which are given to both dental and medical students, are taught in the adjoining College of Physicians and Surgeons, the corridors of the two schools being continuous. In adjacent wings, the halls of which are also continuous with those of the School, the wards and outpatient departments of the Presbyterian and associated hospitals are located, thus giving the closest possible contact and association with all branches of health service. The Dental School clinic includes as one of its functions the dental care of the patients of the Medical Center hospitals.

In order to strengthen the instruction of dental and medical students and to fulfill a further step in the integration of dental education and research with the medical program at the Columbia-Presbyterian Medical Center which was visualized when the Dental School was made a part of the Center in 1928, the Faculties of the two schools were merged July 1, 1945. This Faculty is responsible for the educational programs in medicine, dentistry, public health, and nursing. A committee on dental education, established by University statute, of which a majority is from the Department of Dental and Oral Surgery and of which the Associate Dean for Dental and Oral Surgery is the chairman, initiates recommendations to the Faculty on the qualifications and admission requirements for dental students, the curriculum of instruction, the candidates for the degree of Doctor of Dental Surgery, and other educational matters dealing with dentistry.

The course in dentistry covers four academic years and leads to the degree of Doctor of Dental Surgery. The greater part of the first two years of the curriculum is taken in the fundamental science departments of instruction in the University, which are integral parts of the College of Physicians and Surgeons and the School of Dental and Oral Surgery.

REQUIREMENTS FOR ADMISSION, PROMOTION AND GRADUATION

ADMISSION TO THE FIRST YEAR OF THE SCHOOL OF DENTAL AND ORAL SURGERY

Application.—It is desirable that candidates make application during the academic year preceding that for which they seek admission. It is not necessary to complete the academic requirements before making application. However, all requirements must be completed before matriculation. Application blanks will be furnished by the Office of the Committee on Admissions of the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application should be accompanied by a check or money order for \$5.00, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable.

The minimum requirement for admission to the first-year class is the satisfactory completion of three full years at an acceptable college of arts and sciences, which must include the satisfactory completion of the following courses required by the New York State Board of Regents:

	<i>Semester Hours</i>
English composition and literature	6
Physics	6
Biology	6
Chemistry (inorganic)	6
Chemistry (an approved course in organic chemistry)	6

A point or semester hour is the equivalent of one hour of lecture or recitation plus two hours of outside work or three hours of laboratory work per week, per semester. Suitable laboratory work must be included in each of the courses in science.

Inasmuch as an understanding of the biological sciences is based upon the knowledge of the underlying sciences of chemistry, physics, and biology, students are urged, so far as time permits, to take additional courses in quantitative, qualitative, physical, and organic chemistry, physics, comparative anatomy, and other advanced courses in biology, as well as courses in mathematics, German and French, sociology, history, and other subjects of general cultural and scientific value. Courses in fine and industrial arts are also useful.

Owing to the limited number of students who can be accommodated, completion of the requirements for entrance does not guarantee admission. The entire college record of each student is carefully examined by the Committee on Admissions in order that those who are judged most capable of meeting the exacting demands of the course and of the profession of dentistry may be selected. Preference will be given in the selection of students to those who present to the Committee on Admissions evidence of high achievement in selected college courses of special predental value and who, in the opinion of the Committee on Admissions, are most likely to succeed in dentistry, rather than to those who present the largest number of course credits or those who have limited their preparation to the prescribed subjects. Acceptance of a student for admission is based on grounds of character and health as well as on the fulfillment of academic requirements.

An acceptance fee of \$50 is payable within ten days after notification of acceptance (see page 9).

All applicants will be required to take the Dental Aptitude Tests conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

COMBINED COURSES

Combined courses with Columbia College.—Upon receiving ninety-four points credit, sixty-four of which must be for work in Columbia College, including all the work prescribed for the degree of Bachelor of Arts in Columbia College, a student may take studies in the first year of the School of Dental and Oral Surgery, provided he can satisfy the stated requirements and is accepted for admission therein, and will receive the degree of Bachelor of Arts from Columbia College upon the satisfactory completion of the year's work. No course may be counted toward a professional degree and at the same time be included among those which go to make up the ninety-four points referred to above. This combined course with Columbia College is being discontinued for students entering Columbia College in September 1954 and thereafter.

Combined courses with Barnard College.—Students from Barnard College may exercise the professional option after the completion of ninety points of academic work, including all grouped work and a major of twenty-eight points unless this number is reduced in individual cases by special permission of the Committee on Instruction of Barnard College.

Combined courses with the School of General Studies.—Students from the School of General Studies may exercise the professional option after the completion of ninety-four points, including all the courses prescribed for the Bachelor of Science degree, not less than sixty-four of which have been received for work in Columbia University.

Combined courses in dentistry and medicine.—It is usually possible for a graduate of a registered medical school with the degree of Doctor of Medicine to meet the requirements of the School and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one Summer Session.

ADMISSION OF FOREIGN STUDENTS

The State Department of Education has special requirements with which students who are not citizens of this country must comply. Any foreign student desiring to apply to the School of Dental and Oral Surgery should communicate with the Dean.

REGISTRATION

Before attending University courses, every student must present himself at the Office of the Registrar and file a registration blank giving such information as may be required. The periods set aside for registration in each session are stated in the Academic Calendar at the beginning of this Announcement. Registration at a later date is permitted only with the written permission of the Dean, satisfactory cause for the delay having been shown.

FEES

The University Statutes provide that tuition fees and the University fee are payable semiannually in advance. No reduction is made for late registration. Registration will not be complete until such fees are paid. Checks should be drawn to the order of Columbia University and presented in person or mailed to the Office of the Bursar. Payment of fees after the last day of registration (see the Academic Calendar) imposes automatically the statutory charge of \$3.00 for the privilege. Under the regulations, the privileges of the University are not available to any student until he has completed his registration.

The fees to be paid by students are subject to change at any time at the discretion of the Trustees.

The following annual fees are prescribed for dental students:

a) University Fee

1. For each Winter or Spring Session or any part thereof, for students enrolled for:

One to four points, inclusive	\$ 5.00
More than four points to nine points, inclusive	10.00
More than nine points	20.00
2. For registration as engaged in research only, for any period not longer than a Winter or a Spring Session. 20.00

b) Tuition Fee

For the course in dentistry for one academic year (or equivalent) in the case of a student enrolled for the full course, payable in two installments 825.00
 For students not enrolled for the full course, fees are to be assessed by the Registrar as provided by the University Statutes.

- c) Fee for application for a degree 20.00

d) Privileges

- | | |
|---|---------|
| 1. Late registration or late application for a degree or for deficiency or special examinations | \$ 3.00 |
| 2. Deficiency or special examinations | 3.00 |
| 3. Renewal of application for any degree | 1.00 |

e) Student Health Service Fee

This fee will be used to pay the annual premiums of the Associated Hospital Service of New York for hospital insurance and to pay part of the cost of the student health service.

For all students, per academic year 25.00

f) Case rental

For Sophomores, Juniors, and Seniors, rental for one instrument case, for one academic year, payable in two installments 5.00

g) Rebates

1. The University fee, the student health service fee, and the fee for application for any degree shall not be subject to rebate.
2. No tuition fee shall be returned for any course which the student may for any reason discontinue. Exception to this rule may be made only in cases of total withdrawal from the University, when a partial return of fees may be authorized by the Registrar.
3. When a rebate is allowed for the discontinuance of courses or withdrawal from the University, such rebate will be reckoned from the day upon which the Registrar receives notice from the student.

h) Undue breakage

While no deposit is required of students to cover laboratory material and ordinary breakage, any unusual amount of breakage will be charged.

Acceptance fee.—Within ten days after an applicant has been notified that his application has been accepted, he must notify the Dean that he intends to matriculate and accompany his communication with a check or money order for \$50, payable to Columbia University. This acceptance fee will belong to the University and if the applicant does not register at the School for the specific session, it will not be returned. If he registers at the School at the next enrollment of entering students, the amount of the acceptance fee will be deducted from his tuition fees for that session.

Fee for processing of application.—A fee of \$5.00 is charged to every student who applies for admission to the School of Dental and Oral Surgery or the School of Medicine. This fee covers the cost of processing the application.

Fees for repeated courses.—Students obliged to repeat the work for any year are required to pay the full tuition fee.

DENTAL EQUIPMENT

Instruments and supplies.—Each student is required to supply himself with instruments as specified in the official instrument list. The purchase from the University of instruments in original package outfits has been made compulsory, and unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and

regular supplies must be purchased from the University upon order from the instructor. The students will not be allowed to purchase more than is required to complete a case. The quantity and quality are selected with a view to the best possible results and conservation of the student's best interests.

Microscopes.—All students entering the School of Dental and Oral Surgery are required to provide themselves with microscopes of a satisfactory type. A microscope of standard make fitted with the following attachments will fill the requirements:

- a. Triple nosepiece.
- b. Abbe or variable focus condenser.
- c. 10x and 6x oculars.
- d. 16 mm. and 4 mm. objectives.
- e. Oil immersion lens.

Lockers.—Each student will be assigned a locker on entering and will be required to use a combination lock as prescribed by the School.

ESTIMATED EXPENSES

An itemized estimate of the average expenses of a full-time student for an academic year in the School of Dental and Oral Surgery exclusive of travel, clothing, amusements, charity, organizations, and sundries is given below. These items are, of course, variable but should not be overlooked in estimating the total expense. The tuition, room, board, books, and laundry figures are based upon the rates which prevailed during 1953-1954 and can be accepted as applicable in general for the year 1954-1955 unless national economic changes require their alteration.

	<i>Average</i>	<i>Minimum</i>
Tuition and University fees	\$ 865	\$ 865
Miscellaneous fees	35	35
Room	330	186
Board	600	500
Books	150	115
Instruments (see below)	375	350
Laundry	75	35
	<hr/> \$2,430	<hr/> \$2,086

These estimates are subject to correction as the basic prices of supplies and instruments change. Instruments are to be paid for at the opening of the academic year. The cost of books will vary, depending upon the choice made from the selection offered.

STUDENTS

Each person whose registration has been completed will be considered a student of the University during the session for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is registered.

Students prevented by conscientious scruples from complying with academic require-

ments which may be fulfilled only upon days set apart by their church for religious observance should make application to the Dean for an equitable solution.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems advisable. The disciplinary authority of the University is vested in the President in such cases as he deems proper, and, subject to the reserved power of the President, in the dean of each faculty and the director of the work of each administrative board.

WITHDRAWAL

An honorable discharge will always be granted to any student in good academic standing and not subject to discipline who may desire to withdraw from the University; but no student under the age of twenty-one years shall be entitled to a discharge without the assent of his parent or guardian furnished in writing to the proper dean. Students withdrawing must notify the Registrar immediately.

The Dean of the School may, for reasons of weight, grant a leave of absence to a student in good standing.

REQUIREMENTS FOR PROMOTION

a) A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the class officers of instruction under whom he has studied during the preceding year.

b) The School of Dental and Oral Surgery reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions of study in the school.

Students are classified for readmission or promotion under the following headings:

1. Recommended for advancement.
2. Recommended for readmission to the same class.
3. Recommended neither for advancement nor for readmission to the same class:
 - (a) Because of failure.
 - (b) Because they fall under paragraph 2 of requirements for promotion.

GRADING OF STUDENTS

The following grade equivalents are used: A, excellent; B, good; C, fair; F, failure.

REQUIREMENTS FOR GRADUATION

In addition to complying with the requirements for admission and to completing the required work of the curriculum, each candidate for the degree of Doctor of Dental Surgery must present satisfactory evidence as required by law of good moral character and of having attained the age of twenty-one years. If the candidate shall have been admitted to advanced standing, he must have spent not less than four academic years or their

equivalent in approved medical or dental colleges in the study of the subjects making up the curriculum of the School of Dental and Oral Surgery.

GRADUATION

Commencement occurs in June, at which time all recipients of degrees awarded during the academic year are expected to attend the exercises. Diplomas are issued in June or at various times during the year.

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work.

An application for a degree, other than the several doctoral degrees, terminates at the next regular time for the issuance of diplomas subsequent to the date of filing; but under conditions prescribed by the respective faculties it may be subject to renewal for a fee of \$1.00 each time that a candidate chooses to come up for consideration, within a period not to exceed three years. Thereafter, with the filing of a second application the regular fee of \$20 is again payable.

Dates for the filing of applications are given in the Academic Calendar at the beginning of this announcement.

COURSES FOR DENTAL HYGIENISTS

In September, 1947, the period of training for dental hygienists was increased from one to two academic years. On October 21, 1947, the University Council approved the establishment of the degree of Bachelor of Science to be conferred upon students who, having been admitted on the basis of two years of approved college study covering not less than sixty points (including satisfactory courses in English, biological science or chemistry, and sociology or psychology), complete the course of instruction in the field of dental hygiene, consisting of two academic years of study, prescribed by the Faculty of Medicine.

Candidates for admission must be women between the ages of eighteen and thirty-five years and must present a record of good health. All candidates are required to make formal application in writing on blanks supplied by the School. After the application has been submitted, the academic record of the candidate should be sent to the School at the request of the candidate. Whenever possible, a personal interview is desirable before the candidate is accepted.

Applicants must satisfy the following requirements: Two years of sixty semester hours of credit in liberal arts from a college or university approved by Columbia University. The following subjects are required:

	<i>Semester Hours</i>
English	6
Biological science or chemistry	3
Sociology or psychology	3

Upon the successful completion of the two-year curriculum in dental hygiene, the Bachelor of Science degree will be conferred.

Applicants who lack not more than eight credits of the sixty credits required for admission will be considered for matriculation on the condition that the eight credits be earned during the Summer Session between the Junior and Senior years.

For further information address the Director, Courses for Dental Hygienists, 630 West 168th Street, New York 32, N.Y.

SHORT COURSES FOR GRADUATES IN DENTISTRY

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1954-1955 short refresher courses will be offered in various subjects.

Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses. For further information see the Announcement of Postgraduate Courses for Dentists, which may be obtained from the Dean, School of Dental and Oral Surgery.

CERTIFICATE OF TRAINING

The School of Dental and Oral Surgery is authorized to grant certificates of training in special branches of dentistry. The course of study for the certificate of training includes special work in the clinical and basic science branches of dentistry approved by the Dean. At present, an organized sixteen-month course is offered to qualified graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, and periodontology. For further information see the Announcement of Postgraduate Courses for Dentists, which may be obtained from the Dean, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University: anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable pre-dental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the Announcement of the Faculty of Pure Science, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N. Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Director, School of Public Health, 600 West 168th Street, New York 32, N.Y.

LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N.Y. All applications for admission to the examinations should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

PLAN OF INSTRUCTION

The curriculum is arranged with the object of providing the student with the necessary opportunities for acquiring a knowledge of the fundamental sciences in relation to dentistry and the techniques of approach in dental problems. Beginning in the first two academic years with a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology, the student prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skills required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of the dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by means of the division of classes into small sections, conferences, and the comprehensive case method of instruction.

CURRICULUM

1954-1955

<i>Subjects*</i>	<i>Lecture or Seminar Hours</i>	<i>Lab. or Clinic Hours</i>	<i>Total Hours</i>
FIRST YEAR			
Anatomy			
Embryology 152 <i>F</i>	18		18
Gross 151 <i>FS</i>	50	222	272
Microscopic 150 <i>FS</i>	42	126	168
Neuro 153 <i>T</i>	30	36	66
Oral 101 <i>ST</i>	19	82	101
Biochemistry 150 <i>ST</i>	38	117	155
Histology, Oral 115 <i>ST</i>	25	52	77
Physiology 150 <i>FS</i>	56	152	208
Theory and Practice			
Dental History 287 <i>T</i>	10		10
			1,075

* Letter following course number designates trimester: *F* = first, *S* = second, and *T* = third.

<i>Subjects*</i>	<i>Lecture or Seminar Hours</i>	<i>Lab. or Clinic Hours</i>	<i>Total Hours</i>
SECOND YEAR			
Crown and Bridge 105 <i>ST</i>	20	184	204
Dental Materials 126 <i>FS</i>	10	56	66
Microbiology 151 <i>F</i> and 152 <i>F</i>	43	99	142
Operative Dentistry 131 <i>FST</i>	20	187	207
Pathology 150 <i>FS</i>	54	141	195
Periodontology 151 <i>T</i>	10	44	54
Pharmacology 150 <i>ST</i>	55	33	88
Prosthetic Dentistry 157 <i>FST</i>	20	198	218
Psychiatry 150 <i>S</i>	11		11
Surgery, Principles 168 <i>ST</i>	10		10
Surgery, Oral 270A <i>ST</i>	10		10
Theory and Practice Therapeutics 286 <i>T</i>	10		10
			1,215
THIRD YEAR			
Anatomy, Maxillofacial 252 <i>S</i>	10		10
Crown and Bridge Technique 205 <i>F</i>		96	96
Clinic 206 <i>ST</i>	10	114	124
Applied Occlusal Dynamics 212 <i>T</i>		30	30
Diagnosis 212 <i>FST</i>	30	25	55
Operative Dentistry 233 <i>FST</i>	10	276	286
Orthodontics 241 <i>F</i>	20	60	80
Pathology, Oral 246 <i>FS</i>	20	60	80
Periodontology 251 <i>S</i>		30	30
Practice of Medicine 278 <i>ST</i>	40	22	62
Prosthetic Dentistry 260 <i>FST</i> and 261 <i>FST</i>	20	177	197
Radiology 267 <i>F</i>	10	15	25
Surgery, Oral 270B <i>F</i>	10	20	30
			1,105
FOURTH YEAR			
Crown and Bridge 210 <i>FST</i> and 211 <i>FST</i>	10	165	175
Diagnosis 213 <i>F</i>		25	25
Diagnosis Seminar 214 <i>S</i>		30	30
Diagnosis 215 <i>T</i> (continuation of 214)	10		10
Orthodontics 242 <i>FST</i>		30	30
Operative Dentistry 234 <i>FST</i>	20	305	325
Pedodontics 202 <i>FST</i>	10	87	97
Periodontology 252 <i>FS</i> and 253 <i>FS</i>	20	30	50
Prosthetic Dentistry 263 <i>FST</i> and 264 <i>FST</i>	10	165	175
Public Health 222 <i>S</i>	20		20
Surgery, Oral 272 <i>FST</i>	40	60	100
Surgery Seminar 274 <i>T</i>	10		10
Surgical Prosthesis 265 <i>T</i>		30	30
Theory and Practice Clinical Oral Physiology 283 <i>F</i>	10		10
Ethics, Jurisprudence and Practice Ad- ministration 281 <i>FST</i>	30		30
Comprehensive 285 <i>T</i>			
			1,117

* Letter following course number designates trimester: *F* = first, *S* = second, and *T* = third.

COURSES OF INSTRUCTION

For purposes of instruction the work of each academic year is scheduled in three sessions of eleven weeks each, which are designated as First, Second, and Third Trimesters.

For a detailed statement of the content of each course, the student is referred to the departmental statements which follow.

The outline on pages 15 and 16 shows the work required of a candidate for the degree of Doctor of Dental Surgery. The University reserves the right to make such changes in the program of studies at any time as experience may prove desirable.

ANATOMY

Anatomy 101—Oral anatomy. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Anatomy 115—Oral histology and embryology. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150—Microscopic anatomy. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as *Anatomy 101F* in the Medical School.

Anatomy 151—Gross anatomy. Freshman year.

Lectures, conferences, and laboratory.

Anatomy 152—Embryology. Freshman year.

Lectures and demonstration dealing with the dynamics of vertebrate development, with particular reference to mammals and man.

Anatomy 153—Neuroanatomy. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to *Anatomy 106S* in the Medical School.

Anatomy 252—Maxillofacial anatomy. Junior year.

Lectures and demonstrations. A review course with special application to the problems of the major fields of dentistry.

BIOCHEMISTRY

Biochemistry 150—Introductory biochemistry. Freshman year.

Lectures and laboratory. A study of the chemistry of life processes with special reference to the animal organism.

DENTAL MATERIALS

Dental Materials 126—Physical properties of dental materials. Sophomore year.

Lectures and laboratory on the physical and chemical properties of the metals and other materials used in dentistry, with clinical applications.

DIAGNOSIS

Dagnosis 212—Dental diagnosis lectures and clinic. Junior year.

Lectures and clinical practice in diagnostic procedures, comprehensive diagnosis, pulp symptomatology, radiographic interpretation, and diagnosis of lesions and diseases of the oral cavity.

Diagnosis 213—Dental diagnosis clinic. Senior year.

Continuation of clinic of *Diagnosis 212*.

Diagnosis 214—Diagnosis seminar. Senior year.

Discussion and differential diagnosis of diseases of the oral cavity.

Diagnosis 215—Diagnosis seminar. Senior year.

Continuation of *Diagnosis 214*.

MEDICINE**Medicine 278—General survey of medicine. Junior year.**

Lectures and conferences covering phases of general medicine; also clinics in which patients are studied for conspicuous manifestations of systemic conditions and their significance.

MICROBIOLOGY**Microbiology 151—General medical microbiology and immunology. Sophomore year.**

Lectures, conferences, and laboratory.

Microbiology 152—Principles of microbiology, immunology, and epidemiology. Sophomore year.

This course is identical with *Microbiology 105F* in the Medical School except that lectures on the mouth bacteria are substituted for several of those of the medical series.

OPERATIVE DENTISTRY**Operative Dentistry 131—Elements of operative dentistry. Sophomore year.**

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filing of teeth.

Operative Dentistry 233—Operative clinical practice. Junior year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234—Advanced clinical practice. Senior year.

A continuation in lectures and clinic of *Operative Dentistry 233* with the consideration of special problems in operative practice, including endodontia.

ORTHODONTICS**Orthodontics 241—Principles of orthodontics. Junior year.**

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion in orthodontics by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and constructing of removable appliances used as space maintainers and habit breakers and to correcting tooth alignment in preparation for restorative dentistry and treatment of periodontal conditions. Clinical practice in the use of appliances constructed in the laboratory.

Orthodontics 242—Orthodontic clinic. Senior year.

Clinical orthodontics.

PATHOLOGY**Pathology 150—General and special pathology. Sophomore year.**

A study of important pathological conditions, demonstrated by museum specimens and a very complete series of histological preparations.

Pathology 246—Oral pathology. Junior year.

Lectures, conferences, and laboratory work on the diseases of the jaws, mouth, and teeth.

Pathology 247—Oral pathology seminar. Senior year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS**Pedodontics 202—Pedodontics lectures and clinic. Senior year.**

Lectures and conferences on operative dental procedures for children, management of child dental patients, and application of present knowledge of dental development and preventive dentistry.

PERIODONTOLOGY**Periodontology 151—Periodontia clinic. Sophomore year.**

Lectures and clinics on dental prophylactic technique and early disturbances of the periodontium.

Periodontology 251—Periodontia clinic. Junior year.

Lectures and clinics in the diagnosis and treatment of periodontal diseases.

Periodontology 252—Periodontology lectures. Senior year.

Lectures and conferences on the theory and practice of periodontology and periodontal histopathology.

Periodontology 253—Periodontia clinic. Senior year.

Work in clinics in the diagnosis and treatment of advanced periodontal diseases.

PHARMACOLOGY**Pharmacology 150—Pharmacology. Sophomore year.**

Lectures, conferences, and laboratory. In this course the pharmacological action of drugs on man and lower animals is studied.

PHYSIOLOGY**Physiology 150—Mammalian physiology. Freshman year.**

Lectures, conferences, and laboratory.

PROSTHETIC DENTISTRY**Prosthetics 105—Crown and bridge lectures and technique. Sophomore year.**

Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.

Prosthetics 157—Prosthetic lectures and technique. Sophomore year.

Lectures and technical procedures in full and partial denture construction.

Prosthetics 205—Crown and bridge lectures and technique. Junior year.

Lectures on the clinical procedures in crown and bridgework.

Prosthetics 206—Crown and bridge clinic. Junior year.

Clinical construction of elementary crown and bridgework.

Prosthetics 210—Crown and bridge lectures. Senior year.

Lectures and conferences on various types of bridgework.

Prosthetics 211—Crown and bridge clinic. Senior year.

Clinical construction of crown and bridgework.

Prosthetics 212—Applied occlusal dynamics. Junior year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260—Prosthetic lectures. Junior year.

Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.

Prosthetics 261—Prosthetic clinic. Junior year.

Clinical construction of full and partial dentures.

Prosthetics 263—Prosthetic clinic. Senior year.

Clinical construction of full and partial dentures.

Prosthetics 264—Prosthetic lectures. Senior year.

A series of lectures on clinical considerations in partial denture diagnosis, design, and construction.

Prosthetics 265—Surgical prosthesis. Senior year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

PSYCHIATRY**Psychiatry 150—Psychiatry for the dentist. Sophomore year.**

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH**Public Health 222—Principles of public health. Senior year.**

Survey course in the theory and practice of preventive medicine, dentistry, and public health. Fundamental principles of administration, statistics, epidemiology, industrial hygiene, and sanitation. The principles and problems of dental public health practice are emphasized.

RADIOLOGY**Radiology 267—Oral radiology practice. Junior year.**

Lectures, readings, and discussions on topics relative to oral radiology.
Practice in exposing, processing, and mounting dental radiographs.

SURGERY**Surgery 168—Principles of surgery. Sophomore year.**

Lectures, seminars, and basic principles of general surgery.

Surgery 270A—Oral surgery. Sophomore year.

Lectures and seminars on local anesthesia and removal of teeth.

Surgery 270B—Oral surgery. Junior year.

Demonstrations, lectures, and clinical practice in local anesthesia and the removal of teeth.

Surgery 272—Oral surgery. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia.

Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274—Oral surgery seminar. Senior year. Required.

Lectures and seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation.

THEORY AND PRACTICE OF DENTISTRY**Theory and Practice 281—Dental ethics, jurisprudence, and practice administration. Senior year.**

Lecture and conference course on dental ethics, jurisprudence, economics, office conduct, and practice management.

Theory and Practice 283—Clinical oral physiology. Senior year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and clinical conferences.

Theory and Practice 285—Comprehensive case. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of X-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 286—Therapeutics. Sophomore year.

Lectures and conferences on drugs and other therapeutic agents used in dentistry.

Theory and Practice 287—Dental history. Freshman year.

Lectures and conferences on the development of the scientific and technical principles of modern dentistry.

TEXTBOOKS

The following list includes most of the books normally used. As a rule, only the latest editions of the textbooks should be purchased. Students are warned against buying any books until specifically advised by the departments concerned.

ANATOMY. GROSS ANATOMY: One of the following three: Gray's *Anatomy*; Cunningham, *Textbook of Anatomy*; or Morris, *Human Anatomy*; one of the following three dictionaries: Stedman, Gould, or Dorland's American; Cunningham, *Manual of Practical Anatomy*, Vols. II and III; one of the following four: Grant, *Atlas of Anatomy*; Truex and Kellner, *Detailed Atlas of the Head and Neck*; Spalteholz, *Hand Atlas of Human Anatomy*; or Anson, *Atlas of Human Anatomy*.

MAXILLOFACIAL ANATOMY: Shapiro, *Applied Anatomy of the Head and Neck* (1954 ed.)

EMBRYOLOGY: One of the following three: Arey, *Developmental Anatomy*; Hamilton, *Human Embryology*; or Patten, *Human Embryology*.

MICROSCOPIC ANATOMY: Bailey, *Textbook of Histology* (13th ed.); mimeographed laboratory manual.

NEUROANATOMY: Strong and Elwyn, *Human Neuroanatomy*; mimeographed laboratory manual.

ORAL HISTOLOGY AND EMBRYOLOGY: Orban, *Oral Histology and Embryology*; Diamond, *Dental Anatomy*.

BIOCHEMISTRY: Harrow and Mazur, *Textbook of Biochemistry* (6th ed.); Karshan, *Laboratory Manual of Biochemistry for Dental Students*.

DENTAL ETHICS, JURISPRUDENCE, AND PRACTICE ADMINISTRATION: Regan, *The Doctor, the Patient and the Law*.

DENTAL THERAPEUTICS: Council on Therapeutics, American Dental Association, *Accepted Dental Remedies*; McGehee and Green, *Pharmacology and Pharmacotherapeutics for Dentists*.

DIAGNOSIS: Thoma, *Oral Pathology* (3d ed.).

MEDICINE: One of the following three: Yater, *Fundamentals of Internal Medicine* (3d rev. ed.); Comroe, Collins, and Crane, *Internal Medicine in Dental Practice* (4th ed.); or Cecil and Loeb, *Textbook of Medicine* (8th ed.).

MICROBIOLOGY: Laboratory Manual in Microbiology and Immunology; Smith and Conant, *Zinsser's Textbook of Bacteriology* (10th ed.).

OPERATIVE DENTISTRY: Black, *Operative Dentistry*, Vols. II and III; *Operative Dentistry Syllabus*; Grossman, *Root Canal Therapy*.

ORAL PATHOLOGY: Thoma, *Oral Pathology* (3d ed.); or Kronfeld, *Histopathology of the Teeth* (3d ed.).

ORTHODONTICS: Salzmann, *Principles of Orthodontics*.

PATHOLOGY: One of the following four: Boyd, *Textbook of Pathology*; Karsner, *Textbook of Pathology*; Moore, *Textbook of Pathology*; or Anderson, *Pathology*.

PEDODONTICS: McBride, *Juvenile Dentistry* (5th ed.).

PERIODONTOLOGY: Beube, *Periodontology*; and Goldman, *Periodontia*.

PHARMACOLOGY: Goodman and Gilman, *Pharmacological Basis of Therapeutics* (1954).

PHYSIOLOGY: Bard, *Macleods Physiology in Modern Medicine* (10th ed.).

PROSTHETIC DENTISTRY: Skinner, *Science of Dental Materials*; Swenson, *Complete Dentures*; Tylman, *Crown and Bridge Prosthesis*; United States Government Printing Office, *Physical Properties of Dental Materials*; Young *et al.*, *Syllabus on Complete Dentures*.

PSYCHIATRY: Strecker, *Fundamentals of Psychiatry* (5th ed.).

RADIOLOGY: McCall and Wald, *Clinical Dental Roentgenology* (3d ed.).

SURGERY: Berger, *Principles and Technique of Oral Surgery*; Berger, *Principles and Technique of the Removal of Teeth*; Parker, *Synopsis of Traumatic Injuries of the Face and Jaw*.

SURGICAL PROSTHESIS: Beder, *Surgical and Maxillofacial Prosthesis*.

STUDENT ORGANIZATIONS

REGISTRATION OF STUDENT ORGANIZATIONS

Blanks for the registration of student organizations, other than those for which the responsibility is assumed by a faculty or department of instruction, may be obtained at the room assignment desk in the Office of the Registrar, 315 University Hall.

Such student organizations come under the jurisdiction of the Committee on Student Organizations of the University Council and may be granted the privileges of the use of names in which the name of the University is embodied or suggested and the use of University rooms or grounds for meetings and bulletin boards for announcements, only if they have filed their registration blanks, furnishing the committee with lists of officers and other executive members, statements of purposes, copies of constitutions and bylaws, and information concerning the nature of any affiliation or connection with non-University organizations.

OMICRON KAPPA UPSILON

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity, was chartered in the School of Dental and Oral Surgery in 1934. The purpose of this organization is to recognize and honor a maximum of 12 percent of the members of the graduating Senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

THE WILLIAM JARVIE SOCIETY

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and to which Sophomores, Juniors, and Seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

FACILITIES

LIBRARY

The Medical Library occupies part of the three lower floors in the College of Physicians and Surgeons. It provides current literature (both books and journals) for faculty and students, and it aids in research through its own collections of current and historical works and through its unique bibliographic service.

The Library contains approximately two hundred thousand volumes of books and journals, some five thousand pamphlets, and about two thousand lantern slides on the history of medicine. More than twenty-three hundred periodicals are received regularly. A professional library staff is available to aid students, faculty, and research workers in the Schools of Medicine, Dentistry, Nursing, Public Health, and the hospitals of the Medical Center.

The libraries on Morningside Heights, containing more than two million volumes, are open to all students of dentistry. The main collection is housed in Butler Library; special and departmental collections are located in various other buildings on the campus. They

include collections on biology, chemistry, physics, psychology, sociology, and other subjects related to dentistry and supplement the special collections available in the Medical Library. Books may be borrowed for home use.

Leaflets describing the collections and services of the University Libraries are available in any of the library reading rooms. The Medical Library and all other libraries post their hours of opening.

UNIVERSITY PRIVILEGES

All students enrolled in the Dental School enjoy the privileges and facilities of the University campus, including access to the University libraries, gymnasium, and other activities.

University gymnasium.—The gymnasium is situated on Morningside Heights and is open daily, except Sundays and holidays. Students of the School of Dental and Oral Surgery may enjoy its privileges and have the use of the gymnasium, baths, and private lockers. A service charge for physical education, amounting to one dollar (\$1.00) per session (Winter, Spring, or Summer), is charged each student using the facilities of the University gymnasium without formal registration in physical education courses. In addition a deposit must be made of two dollars (\$2.00) for a lock, locker, and towel.

STUDENT HEALTH SERVICE

The Student Health Service is located in Room 220, 2nd Floor, Vanderbilt Clinic. Daily office hours are held for sick students. Emergency treatment after 5:00 P.M. and on week ends may be obtained in Admitting Emergency, Vanderbilt Clinic. Students, sick at home and living within the immediate vicinity of the Medical Center, may contact the Physician-in-Charge of the Health Service. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under a hospitalization insurance policy.

RELIGIOUS LIFE

The life of the University community finds religious expression through St. Paul's Chapel and Earl Hall and through the ministry of the Chaplain and those associated with him in his work. The Chaplain of the University is assisted by three religious counselors: the Counselor to Protestant Students, the Counselor to Roman Catholic students, and the Counselor to Jewish students.

Daily services are held in the Chapel, and students are urged to familiarize themselves with the schedules, which are conveniently posted.

There are a number of student religious organizations to which the Chaplain and counselors serve as advisers and with which students are cordially urged to affiliate themselves.

The Chaplain and the counselors are especially eager to establish warm personal relations with students and to meet them in consultation, at the Chapel or in their offices in Earl Hall.

UNIVERSITY RESIDENCE HALLS

Residence halls announcements and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125 Livingston Hall, Columbia University, New York 27, N.Y., or (for women) from the Johnson Hall Office, 411 West 116th

Street, New York 27. The advance reservation deposit is payable upon receipt of room assignment. Checks must be made payable to Columbia University.

KING'S CROWN HOTEL

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates, available for relatives and guests of members of the University community.

INTERNATIONAL HOUSE

International House, while not a University residence hall, is primarily a residence for students at Columbia University and other colleges and universities in New York City. It offers comfortable accommodations at reasonable rates. For further information, write to International House, 500 Riverside Drive, New York 27, N.Y.

MEDICAL CENTER BOOKSTORE

The Medical Center Bookstore, located on the second floor of the College of Physicians and Surgeons, is maintained for the convenience of the students and staff of the Medical Center schools and hospitals. The store carries a full stock of textbooks and all other student supplies. Substantial savings are effected whenever the rules of manufacturers and publishers permit. The store is open on weekdays from 8:45 A.M. to 5:30 P.M.; Saturdays, 8:45 A.M. to 1:30 P.M.

FELLOWSHIPS, SCHOLARSHIPS, AND PRIZES

Three Ellis Fellowships are awarded annually to qualified graduates of any of the colleges of recognized rank in the state of Vermont. The holders of these fellowships may pursue resident graduate studies under any one of the graduate schools maintained by the University and are eligible for reappointment for no more than two additional years, with the proviso that a holder of the fellowship who is a student in medicine may be eligible for reappointment for no more than three additional years. The annual stipend is \$1,500. Applications should be submitted on or before February 20 on blanks to be filed with the Office of University Admissions.

See also "Graduate Courses in the Basic Sciences" on page 13.

The Van Woert Scholarship Fund was established by the alumni of the School of Dental and Oral Surgery in 1940. The award is given annually to a Senior student in the dental school who stands high in scholastic attainments, in personal character, and in potentiality of being a credit to Columbia University and the dental profession.

A prize known as the Ella Maria Ewell Medal is awarded annually to the student of the School of Dental and Oral Surgery who, in the judgment of the Faculty, is most proficient in some subject of dentistry.

The Alumni Association makes an annual award of the Rowe-Wiberg Medal to the Senior student who has shown the greatest proficiency in prosthetic dentistry.

An annual award is made by the Sigma Epsilon Delta Fraternity to the graduating student who, in the opinion of the Faculty, shows the greatest promise.

The staff of the Division of Operative Dentistry has established an annual prize for excellence in operative dentistry.

STUDENT LOANS

Loan funds are provided in a limited amount for the assistance of students, but it is the general policy to grant loans only to students who have satisfactorily completed at least one session of residence at the University. Application is made on a blank which may be obtained from the office of the Dean or of the Bursar. Applications for loans for the Winter Session should be filed by September 15; for the Spring Session, by January 15.

STUDENT EMPLOYMENT

Owing to the heavy schedule of the Dental School, it is difficult for dental students to undertake outside part-time work during the academic year and, so far as practical, other financial arrangements should be made.

OFFICERS OF INSTRUCTION

- HAROLD A. ABRAMSON, *Assistant Clinical Professor of Physiology*; A.B., Columbia, 1920; M.D., 1923
- THOMAS H. ALLEN, *Associate Professor of Physiology*; A.B., Iowa, 1936; Ph.D., 1941
- FRANZ ALTMANN, *Associate Clinical Professor of Otolaryngology*; M.D., Vienna, 1925
- VIRGINIA APGAR, *Professor of Anesthesiology*; A.B., Mt. Holyoke, 1929; M.D., Columbia, 1933
- EDMUND APPELBAUM, *Associate Professor of Dental Anatomy*; D.D.S., New York College of Dentistry, 1922
- HOWARD ARDEN, *Assistant Professor of Dentistry*; B.S., Fordham, 1943; D.D.S., Columbia, 1946
- HERBERT D. AYERS, JR., *Assistant Clinical Professor of Dentistry*; A.B., Columbia, 1929; D.D.S., 1931
- MARGARET W. BARNARD, *Associate Professor of Public Health Practice*; A.B., Smith, 1917; M.D., Cornell, 1923; D.P.H., Johns Hopkins, 1935
- HENRY A. BARTELS, *Assistant Professor of Oral Pathology*; B.S., Rhode Island State, 1917; B.S., Columbia, 1925; D.D.S., 1927
- HERBERT BARTELSTONE, *Assistant Professor of Pharmacology*; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945
- FRANK E. BEUBE, *Clinical Professor of Dentistry*; L.D.S., D.D.S., Toronto, 1930
- HAROLD W. BROWN, *Associate Dean (Public Health); Director, School of Public Health; Professor of Parasitology*; A.B., Kalamazoo, 1924; M.S., Kansas State, 1925; Sc.D., Johns Hopkins, 1928; M.D., Vanderbilt, 1933; D.P.H., Harvard, 1936
- JACK BUDOWSKY, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1943
- THEODORE BUNDRANT, *Associate Clinical Professor of Dentistry*; D.D.S., Howard, 1929
- LESTER R. CAHN, *Associate Professor of Oral Pathology*; D.D.S., New York College of Dentistry, 1918
- EDWARD A. CAIN, JR., *Associate Professor of Dentistry*; B.S., Fordham, 1942; D.D.S., Columbia, 1945
- NEAL W. CHILTON, *Assistant Professor of Dental Public Health Practice*; B.S., College of the City of New York, 1939; D.D.S., New York University, 1943; M.P.H., Columbia, 1946
- LOUIS J. CIZEK, *Assistant Professor of Physiology*; B.S., Fordham, 1937; M.D., Columbia, 1941
- E. GURNEY CLARK, *Professor of Epidemiology*; A.B., Vanderbilt, 1927; M.D., 1931; M.P.H., Johns Hopkins, 1936; D.P.H., 1944
- HANS T. CLARKE, *Professor of Biochemistry*; B.Sc., London, 1908; D.Sc., 1914
- LOUIS A. COHN, *Associate Clinical Professor of Dentistry*; D.D.S., Pennsylvania, 1928
- ROBERT W. COON, *Associate Professor of Pathology*; B.S., North Dakota, 1942; M.D., Rochester, 1944
- WILFRED M. COPENHAVER, *Professor of Anatomy*; A.B., Western Maryland, 1921; Ph.D., Yale, 1925
- JOSEPH A. CUTTITA, *Assistant Professor of Dentistry*; A.B., Fordham, 1932; M.S., 1936; D.D.S., Columbia, 1939
- SAMUEL R. DETWILER, *Professor of Anatomy*; Ph.B., Yale, 1914; A.M., 1916; Ph.D., 1918; M.S. (hon.), 1931
- NICHOLAS DI SALVO, *Assistant Professor of Physiology*; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1952
- ADOLPH ELWYN, *Associate Professor of Neuroanatomy*; B.S., Columbia, 1915; A.M., 1917
- EARL T. ENGLE, *Professor of Anatomy*; A.B., Nebraska Wesleyan, 1920; A.M., Colorado, 1924; Ph.D., Stanford, 1925
- JOHN W. FERTIG, *Professor of Biostatistics*; A.B. Ursinus, 1931; Ph.D., Minnesota, 1935
- JOSEPH E. FIASCONARO, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1943
- MORRIS FIERSTEIN, *Associate Clinical Professor of Dentistry*; D.D.S., Columbia, 1921
- JOSEPH E. FLYNN, *Associate Professor of Pathology*; A.B., Columbia (Iowa), 1933; M.D., Iowa, 1938
- LEWIS FOX, *Assistant Clinical Professor of Dentistry*; D.D.S., Maryland, 1927
- HARRY A. GALTON, *Associate Clinical Professor of Dentistry*; D.D.S., Columbia, 1932
- ALFRED GILMAN, *Professor of Pharmacology*; B.S., Yale, 1928; Ph.D., 1931
- LEONARD J. GOLDWATER, *Professor of Occupational Medicine*; A.B., Michigan, 1924; M.D., New York University, 1928; Med.Sc.D., 1937; M.S.P.H., Columbia, 1941
- ROBERT GOTTSEGEN, *Assistant Clinical Professor of Dentistry*; A.B., Michigan, 1939; D.D.S., Columbia, 1943
- MAGNUS I. GREGERSEN, *Dalton Professor of Physiology*; A.B., Stanford, 1923; A.M., 1924; Ph.D., Harvard, 1930
- ROBERT E. HERLANDS, *Associate Professor of Dentistry*; A.B., Columbia, 1941; D.D.S., 1944
- MAURICE J. HICKEY, *Associate Dean (Dental and Oral Surgery); Professor of Oral Surgery*; D.M.D., Harvard, 1932; M.D., Columbia, 1937
- GEORGE W. HINDELS, *Assistant Clinical Professor of Dentistry*; M.D., Vienna, 1938; D.D.S., Columbia, 1943
- LEONARD HIRSCHFELD, *Assistant Clinical Professor of Dentistry*; A.B., Columbia, 1941; D.D.S., 1944
- FRANKLIN HOLLANDER, *Assistant Clinical Professor of Physiology*; B.S., Columbia, 1919; Ph.D., 1923
- HOUGHTON HOLLIDAY, *Professor of Dentistry*; A.B., Minnesota, 1915; D.D.S., 1917; D.D.S. (hon.), Montreal, 1945
- IRVIN L. HUNT, JR., *Associate Professor of Dentistry*; D.D.S., Pennsylvania, 1929
- ALVIN R. JACOBSON, *Associate Professor of Sanitary Science*; B.S., North Dakota, 1935; M.S., 1937; Ph.D., Iowa, 1941
- JAMES JAY, *Assistant Clinical Professor of Dentistry*; D.D.S., Pennsylvania, 1940
- DOROTHY D. JOHNSON, *Assistant Professor of Anatomy*; A.B., Bates, 1941; A.M., Vassar, 1943; Ph.D., Columbia, 1949
- ELVIN A. KABAT, *Professor of Microbiology*; B.S., College of the City of New York, 1932; A.M., Columbia, 1934; Ph.D., 1937
- MAXWELL KARSHAN, *Associate Professor of Biochemistry*; B.S., College of the City of New York, 1917; A.M., Columbia, 1920; Ph.D., 1925
- MORRIS KAVELLE, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1933
- LAWRENCE C. KOLB, *Professor of Psychiatry*; M.D., Johns Hopkins, 1934
- JOSEPH M. LEAVITT, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1940

¹ On leave 1954-1955 (military service).

- BARNET M. LEVY, *Professor of Dentistry*; A.B., Pennsylvania, 1938; D.D.S., 1942; M.S., Virginia, 1944
- GEORGE F. LINDIG, *Associate Clinical Professor of Dentistry*; D.D.S., Minnesota, 1924
- JOHN J. LUCCA, *Assistant Professor of Dentistry*; A.B., New York University, 1941; D.D.S., Columbia, 1947
- JOHN D. MACLENNAN, *Assistant Professor of Microbiology*; M.B., Ch.B., Aberdeen, 1934; M.D., 1939
- WILLIAM J. MILLER, *Assistant Clinical Professor of Dentistry*; A.B., New York University, 1940; D.D.S., Columbia, 1943
- MELVIN MORRIS, *Assistant Clinical Professor of Dentistry*; B.S., College of the City of New York, 1934; M.A., Columbia, 1937; D.D.S., 1941
- WILLIAM L. NASTUK, *Assistant Professor of Physiology*; B.S., Rutgers, 1939; Ph.D., 1945
- ALVIN S. NATHAN, *Associate Clinical Professor of Dentistry*; D.D.S., Columbia, 1926; B.S., New York University, 1935; A.M., 1938
- JOHN L. NICKERSON, *Professor of Physiology*; B.A., Dalhousie, 1925; M.A., 1928; Ph.D., Princeton, 1935
- CARL R. OMAN, *Professor of Dentistry*; D.D.S., Minnesota, 1914
- ARMAND OPPENHEIMER, *Assistant Clinical Professor of Dentistry*; A.B., College of the City of New York, 1926; B.S., Columbia, 1927; D.D.S., 1929
- DOUGLAS B. PARKER, *Clinical Professor of Oral Surgery*; M.D., Long Island College of Medicine, 1912; D.D.S., Pennsylvania, 1914
- MAX A. PLEASURE, *Associate Clinical Professor of Dentistry*; D.D.S., Pennsylvania, 1928; M.S.P.H., Columbia, 1941
- WILLARD C. RAPPLEYE, *Dean, Faculty of Medicine; Vice President in Charge of Medical Affairs; Professor of Medical Economics*; A.B., Illinois, 1915; M.D., Harvard, 1918; A.M., Yale, 1922; Sc.D., Trinity (*hon.*), 1939; Rutgers (*hon.*), 1949; Med.Sc.D., Women's Medical College of Pennsylvania (*hon.*), 1950
- WILLIAM M. ROGERS, *Assistant Professor of Anatomy*; B.S., Georgia, 1921; Ph.D., Cornell, 1927
- WALTER S. ROOT, *Professor of Physiology*; B.S., Wesleyan, 1924; Ph.D., Pennsylvania, 1930
- HARRY M. ROSE, *John E. Borne Professor of Medical and Surgical Research*; A.B., Yale, 1928; M.D., Cornell, 1932
- GEORGE ROSEN, *Professor of Public Health Education*; B.S., College of the City of New York, 1930; M.D., Berlin, 1935; Ph.D., Columbia, 1944; M.P.H., 1947
- SOLOMON N. ROSENSTEIN, *Professor of Dentistry*; B.S., College of the City of New York, 1929; D.D.S., Columbia, 1930
- FRED ROTHENBERG, *Assistant Clinical Professor of Dentistry*; D.M.D., Goettingen, Germany, 1935; D.D.S., Pennsylvania, 1937
- LOUIS A. SAPORITO, *Assistant Clinical Professor of Dentistry*; D.D.S., College of Dental and Oral Surgery of New York, 1922
- WILLIAM J. SAVOY, *Associate Clinical Professor of Dentistry*; B.S., Manhattan, 1931; D.D.S., Columbia, 1935
- SAUL SCHLUGER, *Associate Clinical Professor of Dentistry*; D.D.S., Louisville, 1931
- JOSEPH SCHROFF, *William Carr Professor of Oral Surgery*; B.S., College of the City of New York, 1909; M.D., Columbia, 1920; D.D.S., 1922
- L. LASZLO SCHWARTZ, *Associate Clinical Professor of Dentistry*; D.D.S., Columbia, 1931
- BEATRICE C. SEEGAL, *Associate Professor of Microbiology*; A.B., California, 1918; A.M., 1921; M.D., Johns Hopkins, 1924
- HARRY H. SHAPIRO, *Assistant Professor of Anatomy*; D.M.D., Tufts, 1918
- HAROLD SHERMAN, *Assistant Clinical Professor of Dentistry*; B.S., College of the City of New York, 1935; D.D.S., Michigan, 1946
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¹ On leave 1954-1955.

² On leave 1954-1955 (military service).

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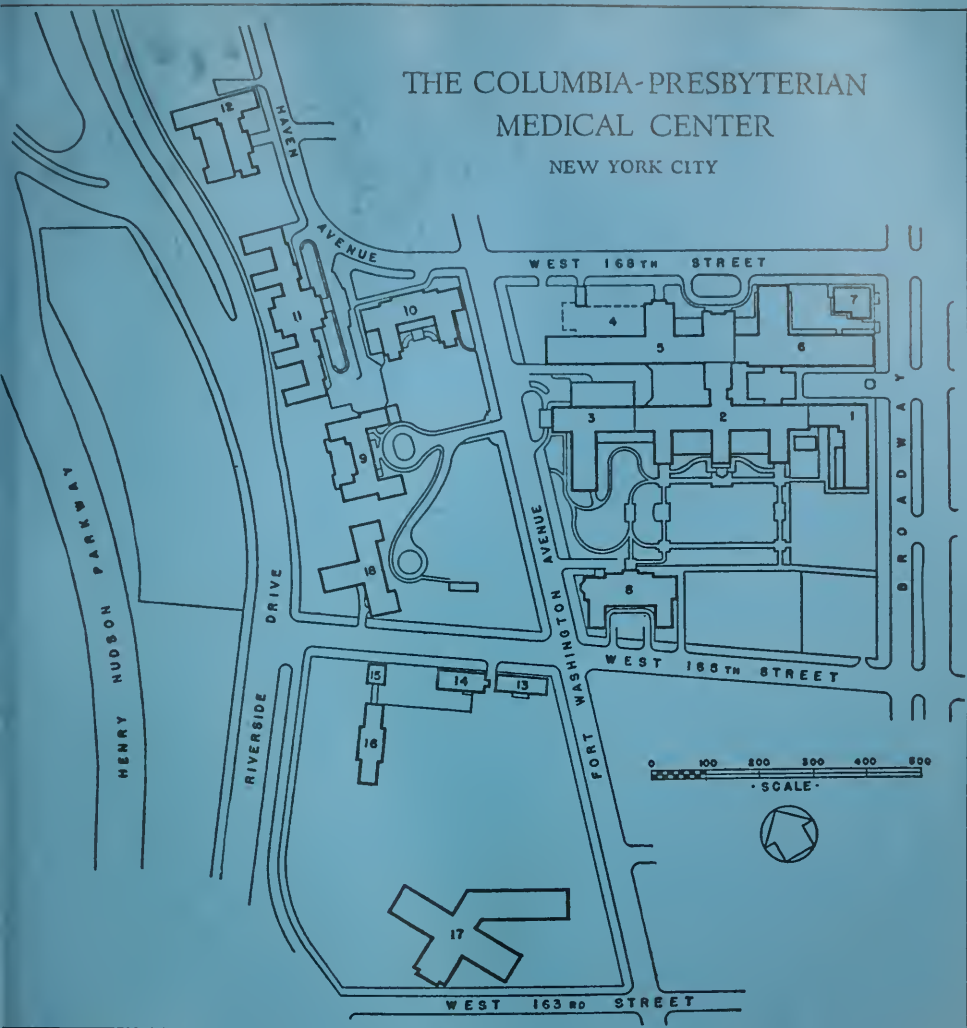
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¹ On leave 1954-1955 (military service).

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THE COLUMBIA-PRESBYTERIAN MEDICAL CENTER NEW YORK CITY



- | | |
|--|---|
| 1. Babies Hospital | 8. Institute of Ophthalmology |
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| Sloane Hospital | 10. Neurological Institute |
| New York Orthopaedic Hospital | 11. New York State Psychiatric Institute and Hospital |
| 3. Harkness Pavilion | 12. Bard Hall |
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COLUMBIA UNIVERSITY
BULLETIN OF INFORMATION

Fifty-fifth Series, No. 20

May 21, 1955

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ANNOUNCEMENT OF THE
**SCHOOL OF DENTAL AND
ORAL SURGERY**
OF THE
FACULTY OF MEDICINE
1955-1956

COLUMBIA-PRESBYTERIAN MEDICAL CENTER

630 WEST 168TH STREET · NEW YORK 32, N.Y.

Columbia University Bulletin of Information

Fifty-fifth Series, No. 20

May 21, 1955

Issued at Columbia University, Morningside Heights, New York 27, N.Y., weekly from January for forty-six consecutive issues. Reentered as second-class matter August 15, 1952, at the Post Office at New York, N.Y., under the Act of August 24, 1912. Acceptance for mailing at a special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized.

The series includes the report of the President to the Trustees and the announcements of the several colleges and schools relating to the work of the next year. These are made as accurate as possible, but the right is reserved to make changes in detail as circumstances require. The current number of any of these announcements will be sent upon written application to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N.Y. Copies may be obtained in person from the Office of the Secretary, 213 Low Memorial Library.

C. U. P. 5,100—1955

Communications

All communications regarding the School of Dental and Oral Surgery, applications for admission, and appointments for personal interviews should be addressed to the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.; telephone: WAdsworth 3-2500.

Announcements

The announcements of each college or school and of the Summer Session may be obtained without charge by writing to the Office of University Admissions.

Letters requesting more detailed information than is contained in this announcement and all correspondence regarding admission should be addressed to the Dean, School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.

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THE SCHOOL OF DENTAL AND ORAL SURGERY

Columbia University was founded in 1754 as King's College by royal grant of George II, King of England, "for the Instruction of Youth in the Learned Languages, and the Liberal Arts and Sciences." The Revolutionary War interrupted its active work, but in 1784 it was reopened as Columbia College. In 1912 the title was changed to Columbia University in the City of New York.

From its inception, the program of dental education at Columbia University has been fostered by and associated with the University's School of Medicine. The Faculty of Medicine at its stated meetings of November and December, 1915, recommended to the Trustees that a dental school be established in the University on "University Lines."

The President of the University in his annual report of 1916 informed the Trustees that "during the year a group of men have come forward with a well-supported proposal that there be established in connection with the Medical School, a school for the training of dental surgeons." The President also reported that "the project was carefully formulated and presented to the Medical Faculty and received the formal approval of that Faculty and later of the Trustees."

In May, 1916, the University issued a pamphlet entitled *A Dental School on University Lines*. In this pamphlet the University stated its intent to establish a school of dentistry in affiliation and coordination with the School of Medicine. The pamphlet's introductory statement outlined the University's policy for dental education which has been consistently followed: "Dentistry and Dental Education are on the threshold of extraordinary development but are unable to take advantage of their opportunities because of the traditional separation of dentistry and medicine. Dentistry has been shown by recent investigation and research to be logically a branch of general medicine."

In the fall of 1917 James N. Jarvie gave a substantial sum to a fund "to found and maintain the proposed dental school of the University, described in the pamphlet entitled *A Dental School on University Lines* issued by Columbia University, May 1916."

In September, 1916, students in dentistry were admitted to courses in Columbia University at the School of Medicine. On March 5, 1917, the Trustees of the University established a school of dentistry as of September 27, 1916, and from date the School of Dentistry became an integral part of the University. On March 1, 1920, the dental building adjacent to the School of Medicine and Vanderbilt Clinic was finished and assigned to the use of the school.

On July 1, 1923, the College of Dental and Oral Surgery of New York (organized in 1905) was merged with the School of Dentistry, and the combined institutions named the School of Dental and Oral Surgery of Columbia University. By this merger Columbia acquired two large buildings, at 302-306 East 35th Street and 309-315 East 34th Street, in which the school was housed up to the time of moving into the Medical Center.

The merging of the schools did not alter the University's policy for dental education. In the 1923-1924 announcement of the School of Dental and Oral Surgery this policy was reaffirmed by the statement, "It is the purpose of the School of Dental and Oral Surgery to combine in the highest degree practicable a sound knowledge of the fundamentals of medicine with adequate training in the technical procedures of dental science and arts."

In September, 1928, the school was moved to the Columbia University-Presbyterian Hospital Medical Center, where the dental department of the school occupies three

floors. The fundamental science subjects, which are given to both dental and medical students, are taught in the adjoining College of Physicians and Surgeons, the corridors of the two schools being continuous. In adjacent wings, the halls of which are also continuous with those of the school, the wards and outpatient departments of the Presbyterian and associated hospitals are located, thus giving the closest possible contact and association with all branches of health service. The Dental School clinic includes as one of its functions the dental care of the patients of the Medical Center hospitals.

In order to strengthen the instruction of dental and medical students and to fulfill a further step in the integration of dental education and research with the medical program at the Columbia-Presbyterian Medical Center which was visualized when the Dental School was made a part of the Center in 1928, the faculties of the two schools were merged July 1, 1945. This faculty is responsible for the educational programs in medicine, dentistry, public health, and nursing. A committee on dental education, established by University statute, of which a majority is from the Department of Dental and Oral Surgery and of which the Associate Dean for Dental and Oral Surgery is the chairman, initiates recommendations to the faculty on the qualifications and admission requirements for dental students, the curriculum of instruction, the candidates for the degree of Doctor of Dental Surgery, and other educational matters dealing with dentistry.

The course in dentistry covers four academic years and leads to the degree of Doctor of Dental Surgery. The greater part of the first two years of the curriculum is taken in the fundamental science departments of instruction in the University, which are integral parts of the College of Physicians and Surgeons and the School of Dental and Oral Surgery.

ADMISSION TO THE FIRST YEAR

Application. It is desirable that candidates make application during the academic year preceding that for which they seek admission. It is not necessary to complete the academic requirements before making application. However, all requirements must be completed before matriculation. Application blanks will be furnished by the Office of the Committee on Admissions of the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application should be accompanied by a check or money order for \$5.00, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable.

The minimum requirement for admission to the first-year class is the satisfactory completion of three full years at an acceptable college of arts and sciences, which must include the satisfactory completion of the following courses required by the New York State Board of Regents:

	<i>Semester Hours</i>
English composition and literature	6
Physics	6
Biology	6
Chemistry (inorganic)	6
Chemistry (an approved course in organic chemistry)	6

A point or semester hour is the equivalent of one hour of lecture or recitation plus two hours of outside work or three hours of laboratory work per week, per semester. Suitable laboratory work must be included in each of the courses in science.

Inasmuch as an understanding of the biological sciences is based upon the knowledge

of the underlying sciences of chemistry, physics, and biology, students are urged, so far as time permits, to take additional courses in quantitative, qualitative, physical, and organic chemistry, physics, comparative anatomy, and other advanced courses in biology, as well as courses in mathematics, German and French, sociology, history, and other subjects of general cultural and scientific value. Courses in fine and industrial arts are also useful.

Owing to the limited number of students who can be accommodated, completion of the requirements for entrance does not guarantee admission. The entire college record of each student is carefully examined by the Committee on Admissions in order that those who are judged most capable of meeting the exacting demands of the course and of the profession of dentistry may be selected. Preference will be given in the selection of students to those who present to the Committee on Admissions evidence of high achievement in selected college courses of special pre-dental value and who, in the opinion of the Committee on Admissions, are most likely to succeed in dentistry, rather than to those who present the largest number of course credits or those who have limited their preparation to the prescribed subjects. Acceptance of a student for admission is based on grounds of character and health as well as on the fulfillment of academic requirements.

An acceptance fee of \$50 is payable within one week after notification of acceptance (see page 7).

All applicants will be required to take the Dental Aptitude Tests conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

COMBINED COURSES

Combined courses with Columbia College. Upon receiving ninety-four points credit, sixty-four of which must be for work in Columbia College, including all the work prescribed for the degree of Bachelor of Arts in Columbia College, a student may take studies in the first year of the School of Dental and Oral Surgery, provided he can satisfy the stated requirements and is accepted for admission therein, and will receive the degree of Bachelor of Arts from Columbia College upon the satisfactory completion of the year's work. No course may be counted toward a professional degree and at the same time be included among those which go to make up the ninety-four points referred to above. This combined course with Columbia College is being discontinued for students entering Columbia College in September, 1954, and thereafter.

Combined courses with Barnard College. Students from Barnard College may exercise the professional option after the completion of ninety points of academic work, including all grouped work and a major of twenty-eight points unless this number is reduced in individual cases by special permission of the Committee on Instruction of Barnard College.

Combined courses with the School of General Studies. Students from the School of General Studies may exercise the professional option after the completion of ninety-four points, including all the courses prescribed for the Bachelor of Science degree, not less than sixty-four of which have been received for work in Columbia University.

Combined courses in dentistry and medicine. It is usually possible for a graduate of a registered medical school with the degree of Doctor of Medicine to meet the requirements of the school and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one Summer Session.

ADMISSION OF FOREIGN STUDENTS

The State Department of Education has special requirements with which students who are not citizens of this country must comply. Any foreign student desiring to apply to the School of Dental and Oral Surgery should communicate with the Dean.

REGISTRATION

Before attending University courses, every student must present himself at the Office of the Registrar and file a registration blank giving such information as may be required. The periods set aside for registration in each session are stated in the Academic Calendar at the beginning of this announcement. Registration at a later date is permitted only with the written permission of the Dean, satisfactory cause for the delay having been shown.

FEES

The University Statutes provide that tuition fees and the University fee are payable semiannually in advance. No reduction is made for late registration. Registration will not be complete until such fees are paid. Checks should be drawn to the order of Columbia University and presented in person or mailed to the Office of the Bursar. Payments of fees after the last day of registration (see the Academic Calendar) imposes automatically the statutory charge of \$3.00 for the privilege. Under the regulations, the privileges of the University are not available to any student until he has completed his registration.

The fees to be paid by students are subject to change at any time at the discretion of the Trustees.

The following annual fees are prescribed for dental students:

a) University fee

1. For each Winter or Spring Session or any part thereof, for students enrolled for:

One to four points, inclusive	\$ 5.00
More than four points to nine points, inclusive	10.00
More than nine points	20.00
2. For registration as engaged in research only, for any period not longer than a Winter or a Spring Session 20.00

b) Tuition fee

For the course in dentistry for one academic year (or equivalent) in the case of a student enrolled for the full course, payable in two installments 825.00
 For students not enrolled for the full course, fees are to be assessed by the Registrar as provided by the University Statutes.

c) Fee for application for a degree

20.00

d) Privileges

1. Late registration or late application for a degree or for deficiency or special examinations 3.00
2. Deficiency or special examinations 3.00
3. Renewal of application for any degree 1.00

e) Student health service fee

This fee will be used to pay the annual premiums of the Associated Hospital Service of New York for hospital insurance and to pay part of the cost of the student health service.

For all students, per academic year \$ 25.00

f) Case rental

For Sophomores, Juniors, and Seniors, rental for one instrument case, for one academic year, payable in two installments 5.00

g) Rebates

1. The University fee, the student health service fee, and the fee for application for any degree shall not be subject to rebate.
2. No tuition fee shall be returned for any course which the student may for any reason discontinue. Exception to this rule may be made only in cases of total withdrawal from the University, when a partial return of fees may be authorized by the Registrar.
3. When a rebate is allowed for the discontinuance of courses or withdrawal from the University, such rebate will be reckoned from the day upon which the Registrar receives notice from the student.

h) Undue breakage

While no deposit is required of students to cover laboratory material and ordinary breakage, any unusual amount of breakage will be charged.

Acceptance fee. Within one week after an applicant has been notified that his application has been accepted, he must notify the Dean that he intends to matriculate and accompany his communication with a check or money order for \$50, payable to Columbia University. This acceptance fee will belong to the University and if the applicant does not register at the school for the specific session, it will not be returned. If he registers at the school at the next enrollment of entering students, the amount of the acceptance fee will be deducted from his tuition fees for that session.

Fee for processing of application. A fee of \$5.00 is charged to every student who applies for admission to the School of Dental and Oral Surgery or the School of Medicine. This fee covers the cost of processing the application.

Fees for repeated courses. Students obliged to repeat the work for any year are required to pay the full tuition fee.

DENTAL EQUIPMENT

Instruments and supplies. Each student is required to supply himself with instruments as specified in the official instrument list. The purchase from the University of instruments in original package outfits has been made compulsory, and unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. The students will not be allowed to purchase more than is required to complete a case. The quantity and quality are selected with a view to the best possible results and conservation of the student's best interests.

Microscopes. All students entering the School of Dental and Oral Surgery are required to provide themselves with microscopes of a satisfactory type. A microscope of standard make fitted with the following attachments will fill the requirements:

- a. Triple nosepiece.
- b. Abbe or variable focus condenser.
- c. 10x and 6x oculars.
- d. 16 mm. and 4 mm. objectives.
- e. Oil immersion lens.

Lockers. Each student will be assigned a locker on entering and will be required to use a combination lock as prescribed by the school.

ESTIMATED EXPENSES

An itemized estimate of the average expenses of a full-time student for an academic year in the School of Dental and Oral Surgery exclusive of travel, clothing, amusements, charity, organizations, and sundries is given below. These items are, of course, variable but should not be overlooked in estimating the total expense. The tuition, room, board, books, and laundry figures are based upon rates which prevailed during 1954-1955 and can be accepted as applicable in general for the year 1955-1956 unless national economic changes require their alteration.

	<i>Average</i>	<i>Minimum</i>
Tuition and University fees	\$ 865	\$ 865
Miscellaneous fees	35	35
Room	330	225
Board	600	500
Books	150	115
Instruments (see below)	400	400
Laundry	75	35
	<hr/> \$2,455	<hr/> \$2,175

These estimates are subject to correction as the basic prices of supplies and instruments change. Instruments are to be paid for at the opening of the academic year. The greatest part of the total instrument cost is incurred in the sophomore year. The cost of books will vary, depending upon the choice made from the selection offered.

STUDENTS

Each person whose registration has been completed will be considered a student of the University during the session for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is registered.

Students prevented by conscientious scruples from complying with academic requirements which may be fulfilled only upon days set apart by their church for religious observance should make application to the Dean for an equitable solution.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems advisable. The disciplinary authority of the University is vested in the President in such cases as he deems proper, and, subject to the reserved power of the President, in the dean of each faculty and the director of the work of each administrative board.

WITHDRAWAL

An honorable discharge will always be granted to any student in good academic standing and not subject to discipline who may desire to withdraw from the University; but no student under the age of twenty-one years shall be entitled to a discharge without the assent of his parent or guardian furnished in writing to the proper dean. Students withdrawing must notify the Registrar immediately.

The Dean of the school may, for reasons of weight, grant a leave of absence to a student in good standing.

REQUIREMENTS FOR PROMOTION

a) A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the class officers of instruction under whom he has studied during the preceding year.

b) The School of Dental and Oral Surgery reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions of study in the school.

Students are classified for readmission or promotion under the following headings:

1. Recommended for advancement.
2. Recommended for readmission to the same class.
3. Recommended neither for advancement nor for readmission to the same class:
 - (a) Because of failure.
 - (b) Because they fall under paragraph *b* of requirements for promotion.

GRADING OF STUDENTS

The following grade equivalents are used: A, excellent; B, good; C, fair; F, failure.

REQUIREMENTS FOR GRADUATION

In addition to complying with the requirements for admission and to completing the required work of the curriculum, each candidate for the degree of Doctor of Dental Surgery must present satisfactory evidence as required by law of good moral character and of having attained the age of twenty-one years. If the candidate shall have been admitted to advanced standing, he must have spent not less than four academic years or their equivalent in approved medical or dental colleges in the study of the subjects making up the curriculum of the School of Dental and Oral Surgery.

GRADUATION

Commencement occurs in June, at which time all recipients of degrees awarded during the academic year are expected to attend the exercises. Diplomas are issued in June or at various times during the year.

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work.

An application for a degree, other than the several doctoral degrees, terminates at the next regular time for the issuance of diplomas subsequent to the date of filing; but under conditions prescribed by the respective faculties it may be subject to renewal for a fee of \$1.00 each time that a candidate chooses to come up for consideration, within a period not to exceed three years. Thereafter, with the filing of a second application the regular fee of \$20 is again payable.

Dates for the filing of applications are given in the Academic Calendar at the beginning of this announcement.

COURSES FOR DENTAL HYGIENISTS

In September, 1947, the period of training for dental hygienists was increased from one to two academic years. On October 21, 1947, the University Council approved the establishment of the degree of Bachelor of Science to be conferred upon students who, having been admitted on the basis of two years of approved college study covering not less than sixty points (including satisfactory courses in English, biological science or chemistry, and sociology or psychology), complete the course of instruction in the field of dental hygiene, consisting of two academic years of study, prescribed by the Faculty of Medicine.

The Master of Science degree in dental hygiene has been established in administration, supervision, and clinical teaching of dental hygiene to fill the demand for women with graduate education who are qualified to assume teaching and supervisory positions in schools for dental hygienists. It also provides opportunity for administrators, supervisors, and instructors presently employed to complete a graduate degree in dental hygiene.

For further information address the Director, Courses for Dental Hygienists, 630 West 168th Street, New York 32, N.Y.

SHORT COURSES FOR GRADUATES IN DENTISTRY

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1955-1956 short refresher courses will be offered in various subjects.

Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses. For further information see the announcement of Postgraduate Courses for Dentists, which may be obtained from the Dean, School of Dental and Oral Surgery.

CERTIFICATE OF TRAINING

The School of Dental and Oral Surgery is authorized to grant certificates of training in special branches of dentistry. The course of study for the certificate of training includes

special work in the clinical and basic science branches of dentistry approved by the Dean. At present, an organized sixteen-month course is offered to qualified graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, and periodontology. For further information see the announcement of Postgraduate Courses for Dentists, which may be obtained from the Dean, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University; anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the announcement of the Faculty of Pure Science, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N. Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Director, School of Public Health, 600 West 168th Street, New York 32, N.Y.

LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N.Y. All applications for admission to the examination should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

PLAN OF INSTRUCTION

The curriculum is arranged with the object of providing the student with the necessary opportunities for acquiring a knowledge of the fundamental sciences in relation to dentistry and the techniques of approach in dental problems. Beginning in the first two academic years with a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology, the student prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skills required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of the dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by means of the division of classes into small sections, conferences, and the comprehensive case method of instruction.

CURRICULUM

1955-1956

<i>Subjects*</i>	<i>Lecture or Seminar Hours</i>	<i>Lab. or Clinic Hours</i>	<i>Total Hours</i>
FIRST YEAR			
Anatomy			
Embryology 152 <i>F</i>	18		18
Gross 151 <i>FS</i>	50	222	272
Microscopic 150 <i>FS</i>	42	126	168
Neuro 153 <i>T</i>	30	36	66
Oral 101 <i>ST</i>	19	82	101
Biochemistry 150 <i>ST</i>	38	117	155
Histology, Oral 115 <i>ST</i>	25	52	77
Physiology 150 <i>FS</i>	56	152	208
Theory and Practice			
Dental History 287 <i>T</i>	10		10
<i>Total</i>			1,075

* Letter following course number designates trimester: *F* = first, *S* = second, and *T* = third.

<i>Subjects*</i>	<i>Lecture or Seminar Hours</i>	<i>Lab. or Clinic Hours</i>	<i>Total Hours</i>
SECOND YEAR			
Crown and Bridge 105 <i>ST</i>	20	184	204
Dental Materials 126 <i>FS</i>	10	56	66
Microbiology 151 <i>F</i> and 152 <i>F</i>	43	99	142
Operative Dentistry 131 <i>FST</i>	20	187	207
Pathology 150 <i>FS</i>	54	141	195
Periodontology 151 <i>T</i>	10	44	54
Pharmacology 150 <i>ST</i>	55	33	88
Prosthetic Dentistry 157 <i>FST</i>	20	198	218
Psychiatry 150 <i>S</i>	11		11
Surgery, Principles 168 <i>ST</i>	10		10
Surgery, Oral 270A <i>ST</i>	10		10
Theory and Practice Therapeutics 286 <i>T</i>	10		10
<i>Total</i>			1,215
THIRD YEAR			
Anatomy, Maxillofacial 252 <i>S</i>	10		10
Crown and Bridge Technique 205 <i>F</i>		96	96
Clinic 206 <i>ST</i>	10	114	124
Applied Occlusal Dynamics 212 <i>T</i>		30	30
Diagnosis 212 <i>FST</i>	30	25	55
Operative Dentistry 233 <i>FST</i>	10	276	286
Orthodontics 241 <i>F</i>	20	60	80
Pathology, Oral 246 <i>FS</i>	20	60	80
Periodontology 251 <i>S</i>		30	30
Practice of Medicine 278 <i>ST</i>	40	22	62
Prosthetic Dentistry 260 <i>FST</i> and 261 <i>FST</i>	20	177	197
Radiology 267 <i>F</i>	10	15	25
Surgery, Oral 270B <i>F</i>	10	20	30
<i>Total</i>			1,105
FOURTH YEAR			
Crown and Bridge 210 <i>FST</i> and 211 <i>FST</i>	10	165	175
Diagnosis 213 <i>F</i>		25	25
Diagnosis Seminar 214 <i>S</i>		30	30
Diagnosis 215 <i>T</i> (continuation of 214)	10		10
Orthodontics 242 <i>FST</i>		30	30
Operative Dentistry 234 <i>FST</i>	20	305	325
Pedodontics 202 <i>FST</i>	10	87	97
Periodontology 252 <i>FS</i> and 253 <i>FS</i>	20	30	50
Prosthetic Dentistry 263 <i>FST</i> and 264 <i>FST</i>	10	165	175
Public Health 222 <i>S</i>	20		20
Surgery, Oral 272 <i>FST</i>	40	60	100
Surgery Seminar 274 <i>T</i>	10		10
Surgical Prosthesis 265 <i>T</i>		30	30
Theory and Practice Clinical Oral Physiology 283 <i>F</i>	10		10
Ethics, Jurisprudence and Practice Ad- ministration 281 <i>FST</i>	30		30
Comprehensive 285 <i>T</i>			
<i>Total</i>			1,117

* Letter following course number designates trimester: F = first, S = second, and T = third.

COURSES OF INSTRUCTION

For purposes of instruction the work of each academic year is scheduled in three sessions of eleven weeks each, which are designated as First, Second, and Third Trimesters.

For a detailed statement of the content of each course, the student is referred to the departmental statements which follow.

The outline on pages 12 and 13 shows the work required of a candidate for the degree of Doctor of Dental Surgery. The University reserves the right to make such changes in the program of studies at any time as experience may prove desirable.

ANATOMY

Anatomy 101—Oral anatomy. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Anatomy 115—Oral histology and embryology. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150—Microscopic anatomy. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as *Anatomy 101F* in the Medical School.

Anatomy 151—Gross anatomy. Freshman year.

Lectures, conferences, and laboratory.

Anatomy 152—Embryology. Freshman year.

Lectures and demonstrations dealing with the dynamics of vertebrate development, with particular reference to mammals and man.

Anatomy 153—Neuroanatomy. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to *Anatomy 106S* in the Medical School.

Anatomy 252—Maxillofacial anatomy. Junior year.

Lectures and demonstrations. A review course with special application to the problems of the major fields of dentistry.

BIOCHEMISTRY

Biochemistry 150—Introductory biochemistry. Freshman year.

Lectures and laboratory. A study of the chemistry of life processes with special reference to the animal organism.

DENTAL MATERIALS

Dental Materials 126—Physical properties of dental materials. Sophomore year.

Lectures and laboratory on the physical and chemical properties of the metals and other materials used in dentistry, with clinical applications.

DIAGNOSIS

Diagnosis 212—Dental diagnosis lectures and clinic. Junior year.

Lectures and clinical practice in diagnostic procedures, comprehensive diagnosis, pulp symptomatology, radiographic interpretation, and diagnosis of lesions and diseases of the oral cavity.

Diagnosis 213—Dental diagnosis clinic. Senior year.

Continuation of clinic of *Diagnosis 212*.

Diagnosis 214—Diagnosis seminar. Senior year.

Discussion and differential diagnosis of diseases of the oral cavity.

Diagnosis 215—Diagnosis seminar. Senior year.

Continuation of *Diagnosis 214*.

MEDICINE

Medicine 278—General survey of medicine. Junior year.

Lectures and conferences covering phases of general medicine; also clinics in which patients are studied for conspicuous manifestations of systemic conditions and their significance.

MICROBIOLOGY

Microbiology 151—General medical microbiology and immunology. Sophomore year.

Lectures, conferences, and laboratory.

Microbiology 152—Principles of microbiology, immunology, and epidemiology. Sophomore year.

This course is identical with *Microbiology 105F* in the Medical School except that lectures on the mouth bacteria are substituted for several of those of the medical series.

OPERATIVE DENTISTRY

Operative Dentistry 131—Elements of operative dentistry. Sophomore year.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233—Operative clinical practice. Junior year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234—Advanced clinical practice. Senior year.

A continuation in lectures and clinic of *Operative Dentistry 233* with the consideration of special problems in operative practice, including endodontia.

ORTHODONTICS

Orthodontics 241—Principles of orthodontics. Junior year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion in orthodontics by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and constructing of removable appliances used as space maintainers and habit breakers and to correcting tooth alignment in preparation for restorative dentistry and treatment of periodontal conditions. Clinical practice in the use of appliances constructed in the laboratory.

Orthodontics 242—Orthodontic clinic. Senior year.

Clinical orthodontics.

PATHOLOGY

Pathology 150—General and special pathology. Sophomore year.

A study of important pathological conditions, demonstrated by museum specimens and a very complete series of histological preparations.

Pathology 246—Oral pathology. Junior year.

Lectures, conferences, and laboratory work on the diseases of the jaws, mouth, and teeth.

Pathology 247—Oral pathology seminar. Senior year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS**Pedodontics 202—Pedodontics lectures and clinic. Senior year.**

Lectures, conferences, and clinical practice relating to operative dental procedures for children, management of child dental patients, and application of present knowledge of dental development and preventive dentistry.

PERIODONTOLOGY**Periodontology 151—Periodontia clinic. Sophomore year.**

Lectures and clinics on dental prophylactic technique and early disturbances of the periodontium.

Periodontology 251—Periodontia clinic. Junior year.

Lectures and clinics in the diagnosis and treatment of periodontal diseases.

Periodontology 252—Periodontology lectures. Senior year.

Lectures and conferences on the theory and practice of periodontology and periodontal histopathology.

Periodontology 253—Periodontia clinic. Senior year.

Work in clinics in the diagnosis and treatment of advanced periodontal diseases.

PHARMACOLOGY**Pharmacology 150—Pharmacology. Sophomore year.**

Lectures, conferences, and laboratory. In this course the pharmacological action of drugs on man and lower animals is studied.

PHYSIOLOGY**Physiology 150—Mammalian physiology. Freshman year.**

Lectures, conferences, and laboratory.

PROSTHETIC DENTISTRY**Prosthetics 105—Crown and bridge lectures and technique. Sophomore year.**

Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.

Prosthetics 157—Prosthetic lectures and technique. Sophomore year.

Lectures and technical procedures in full and partial denture construction.

Prosthetics 205—Crown and bridge lectures and technique. Junior year.

Lectures on the clinical procedures in crown and bridgework.

Prosthetics 206—Crown and bridge clinic. Junior year.

Clinical construction of elementary crown and bridgework.

Prosthetics 210—Crown and bridge lectures. Senior year.

Lectures and conferences on various types of bridgework.

Prosthetics 211—Crown and bridge clinic. Senior year.

Clinical construction of crown and bridgework.

Prosthetics 212—Applied occlusal dynamics. Junior year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260—Prosthetic lectures. Junior year.

Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.

Prosthetics 261—Prosthetic clinic. Junior year.

Clinical construction of full and partial dentures.

Prosthetics 263—Prosthetic clinic. Senior year.

Clinical construction of full and partial dentures.

Prosthetics 264—Prosthetic lectures. Senior year.

A series of lectures on clinical considerations in partial denture diagnosis, design, and construction.

Prosthetics 265—Surgical prosthesis. Senior year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

PSYCHIATRY**Psychiatry 150—Psychiatry for the dentist. Sophomore year.**

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH**Public Health 222—Principles of public health. Senior year.**

Survey course in the theory and practice of preventive medicine, dentistry, and public health. Fundamental principles of administration, statistics, epidemiology, industrial hygiene, and sanitation. The principles and problems of dental health practice are emphasized.

RADIOLOGY**Radiology 267—Oral radiology practice. Junior year.**

Lectures, readings, and discussions on topics relative to oral radiology.
Practice in exposing, processing, and mounting dental radiographs.

SURGERY**Surgery 168—Principles of surgery. Sophomore year.**

Lectures, seminars, and basic principles of general surgery.

Surgery 270A—Oral surgery. Sophomore year.

Lectures and seminars on local anesthesia and removal of teeth.

Surgery 270B—Oral surgery. Junior year.

Demonstration, lectures, and clinical practice in local anesthesia and the removal of teeth.

Surgery 272—Oral surgery. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia.

Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274—Oral surgery seminar. Senior year. Required.

Lectures and seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation.

THEORY AND PRACTICE OF DENTISTRY**Theory and Practice 281—Dental ethics, jurisprudence, and practice administration. Senior year.**

Lecture and conference course on dental ethics, jurisprudence, economics, office conduct, and practice management.

Theory and Practice 283—Clinical oral physiology. Senior year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and clinical conferences.

Theory and Practice 285—Comprehensive case. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of X-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 286—Therapeutics. Sophomore year.

Lectures and conferences on drugs and other therapeutic agents used in dentistry.

Theory and Practice 287—Dental history. Freshman year.

Lectures and conferences on the development of the scientific and technical principles of modern dentistry.

TEXTBOOKS

The following list includes most of the books normally used. As a rule, only the latest editions of the textbooks should be purchased. Students are warned against buying any books until specifically advised by the departments concerned.

ANATOMY. GROSS ANATOMY: One of the following three: Gray's *Anatomy*; Cunningham, *Textbook of Anatomy*; or Morris, *Human Anatomy*. One of the following three dictionaries: Stedman, Gould, or Dorland's American; Cunningham, *Manual of Practical Anatomy*, Vols. II and III. One of the following four: Grant, *Atlas of Anatomy*; Truex and Kellner, *Detailed Atlas of the Head and Neck*; Spalteholz, *Hand Atlas of Human Anatomy*; or Anson, *Atlas of Human Anatomy*.

MAXILLOFACIAL ANATOMY: Shapiro, *Applied Anatomy of the Head and Neck* (1954 ed.).

EMBRYOLOGY: One of the following three: Arey, *Developmental Anatomy*; Hamilton, *Human Embryology*; or Patten, *Human Embryology*.

MICROSCOPIC ANATOMY: Bailey, *Textbook of Histology* (13th ed.); mimeographed laboratory manual.

NEUROANATOMY: Strong and Elwyn, *Human Neuroanatomy*; mimeographed laboratory manual.

ORAL HISTOLOGY AND EMBRYOLOGY: Orban, *Oral Histology and Embryology*; Diamond, *Dental Anatomy*.

BIOCHEMISTRY: Harrow and Mazur, *Textbook of Biochemistry* (6th ed.); Karshan, *Laboratory Manual of Biochemistry for Dental Students*.

DENTAL ETHICS, JURISPRUDENCE, and PRACTICE ADMINISTRATION: Regan, *The Doctor, the Patient and the Law*.

DENTAL THERAPEUTICS: Council on Therapeutics, American Dental Association, *Accepted Dental Remedies*; McGehee and Green, *Pharmacology and Pharmacotherapeutics for Dentists*. (Reference: Goodman and Gilman, *Pharmacological Basis of Therapeutics*, 1955.)

DIAGNOSIS: Thoma, *Oral Pathology* (4th ed.); Burket, *Oral Medicine* (2d ed.).

MEDICINE: One of the following three: Harrison, *Principles of Internal Medicine* (2d ed.); Comroe, Collins, and Crane, *Internal Medicine in Dental Practice* (4th ed.); or Cecil and Loeb, *Textbook of Medicine* (9th ed.).

MICROBIOLOGY: Laboratory Manual in Microbiology and Immunology; Smith and Conant, *Zinsser's Textbook of Bacteriology* (10th ed.).

OPERATIVE DENTISTRY: Black, *Operative Dentistry*, Vols. II and III; *Operative Dentistry Syllabus*; Grossman, *Root Canal Therapy*.

ORAL PATHOLOGY: Thoma, *Oral Pathology* (3d ed.); or Kronfeld, *Histopathology of the Teeth* (3d ed.).

ORTHODONTICS: Salzmann, *Principles of Orthodontics*.

PATHOLOGY: One of the following four: Boyd, *Textbook of Pathology*; Karsner, *Textbook of Pathology*; Moore, *Textbook of Pathology*; or Anderson, *Pathology*.

PEDODONTICS: McBride, *Juvenile Dentistry* (5th ed.).

PERIODONTOLOGY: Beube, *Periodontology*; and Goldman, *Periodontia*.

PHARMACOLOGY: Goodman and Gilman, *Pharmacological Basis of Therapeutics* (1955).

PHYSIOLOGY: Bard, *Macleods Physiology in Modern Medicine* (10th ed.).

PROSTHETIC DENTISTRY: Skinner, *Science of Dental Materials*; Schlosser and Gehl, *Complete Denture Prosthesis*; Swenson, *Complete Dentures*; Tylman, *Crown and Bridge Prosthesis*; United States Government Printing Office, *Physical Properties of Dental Materials*; Young *et al.*, *Syllabus on Complete Dentures*.

PSYCHIATRY: Strecker, *Fundamentals of Psychiatry* (5th ed.); Noyes, *Modern Clinical Psychiatry* (4th ed., 1953); English and Pearson, *Emotional Problems of Living* (1945).

RADIOLOGY: McCall and Wald, *Clinical Dental Roentgenology* (3d ed.).

SURGERY: Berger, *Principles and Technique of Oral Surgery*; Berger, *Principles and Technique of the Removal of Teeth*; Parker, *Synopsis of Traumatic Injuries of the Face and Jaw*.

SURGICAL PROSTHESIS: Beder, *Surgical and Maxillofacial Prosthesis*.

GENERAL INFORMATION

STUDENT ORGANIZATIONS

Blanks for the registration of student organizations, other than those for which the responsibility is assumed by a faculty or department of instruction, may be obtained at the room assignment desk in the Office of the Registrar, 315 University Hall.

Such student organizations come under the jurisdiction of the Committee on Student Organizations of the University Council and may be granted the privileges of the use of names in which the name of the University is embodied or suggested and the use of University rooms or grounds for meetings and bulletin boards for announcements, only if they have filed their registration blanks, furnishing the committee with lists of officers and other executive members, statements of purposes, copies of constitutions and bylaws, and information concerning the nature of any affiliation or connection with non-University organizations.

Omicron Kappa Upsilon

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity was chartered in the School of Dental and Oral Surgery in 1934. The purpose of this organization is to recognize and honor a maximum of 12 percent of the members of the graduating Senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

The William Jarvie Society

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and to which Sophomores, Juniors, and Seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

LIBRARY FACILITIES

The Medical Library occupies part of the three lower floors in the College of Physicians and Surgeons. It provides current literature (both books and journals) for faculty and students, and it aids in research through its own collections of current and historical works and through its unique bibliographic service.

The Library contains approximately two hundred thousand volumes of books and journals, some five thousand pamphlets, and about two thousand lantern slides on the history of medicine. More than twenty-three hundred periodicals are received regularly. A professional library staff is available to aid students, faculty, and research workers in the Schools of Medicine, Dentistry, Nursing, Public Health and Administrative Medicine, and the hospitals of the Medical Center.

The libraries on Morningside Heights, containing more than two million volumes, are open to all students of dentistry. The main collection is housed in Butler Library; special and departmental collections are located in various other buildings on the campus. They include collections on biology, chemistry, physics, psychology, sociology, and other subjects related to dentistry and supplement the special collections available in the Medical Library. Books may be borrowed for home use.

Leaflets describing the collections and services of the University Libraries are available in any of the library reading rooms. The Medical Library and all other libraries post their hours of opening.

UNIVERSITY PRIVILEGES

All students enrolled in the Dental School enjoy the privileges and facilities of the University campus, including access to the gymnasium, and other activities.

The gymnasium is situated on Morningside Heights and is open daily, except Sundays and holidays. Students of the School of Dental and Oral Surgery may enjoy its privileges and have the use of the gymnasium, baths, and private lockers. A service charge for physical education, amounting to one dollar (\$1.00) per session (Winter, Spring, or Summer), is charged each student using the facilities of the University gymnasium without formal registration in physical education courses. In addition a deposit must be made of two dollars (\$2.00) for a lock, locker, and towel.

STUDENT HEALTH SERVICE

The Student Health Service is located in Room 220, 2d Floor, Vanderbilt Clinic. Daily office hours are held for sick students. Emergency treatment after 5 P.M. and on week ends may be obtained in Admitting Emergency, Vanderbilt Clinic. Students, sick at home and living within the immediate vicinity of the Medical Center, may contact the Physician-in-Charge of the Health Service. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under a hospitalization insurance policy.

RELIGIOUS LIFE

The life of the University community finds religious expression through St. Paul's Chapel and Earl Hall and through the ministry of the Chaplain and those associated with him in his work. The Chaplain of the University is assisted by three religious counselors: the counselor to Protestant students, the counselor to Roman Catholic students, and the counselor to Jewish students.

Daily services are held in the Chapel, and students are urged to familiarize themselves with the schedules, which are conveniently posted.

There are a number of student religious organizations to which the Chaplain and counselors serve as advisers and with which students are cordially urged to affiliate themselves.

The Chaplain and the counselors are especially eager to establish warm personal relations with students and to meet them in consultation, at the Chapel or in their offices in Earl Hall.

UNIVERSITY RESIDENCE HALLS

Residence halls announcements and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125 Livingston Hall, Columbia University, New York 27, N.Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. The advance reservation deposit is payable upon receipt of room assignment. Checks must be made payable to Columbia University.

KING'S CROWN HOTEL

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates, available for relatives and guests of members of the University community.

INTERNATIONAL HOUSE

International House, while not a University residence hall, is primarily a residence for students at Columbia University and other colleges and universities in New York City. It offers comfortable accommodations at reasonable rates. For further information, write to International House, 500 Riverside Drive, New York 27, N.Y.

MEDICAL CENTER BOOKSTORE

The Medical Center Bookstore, located on the second floor of the College of Physicians and Surgeons, is maintained for the convenience of the students and staff of the Medical Center schools and hospitals. The store carries a full stock of textbooks and all other student supplies. Substantial savings are effected whenever the rules of manufacturers and publishers permit. The store is open on weekdays from 8:45 A.M. to 5:30 P.M.; Saturdays, 8:45 A.M. to 1:30 P.M.

FINANCIAL AID AND PRIZES

Three Ellis Fellowships are awarded annually to qualified graduates of any of the colleges of recognized rank in the state of Vermont. The holders of these fellowships may pursue resident graduate studies under any one of the graduate schools maintained by the University and are eligible for reappointment for no more than two additional years, with the proviso that a holder of the fellowship who is a student in medicine may be eligible for reappointment for no more than three additional years. The annual stipend is \$1,500. Applications should be submitted on or before February 20 on blanks to be filed with the Office of University Admissions.

See also "Graduate Courses in the Basic Sciences" on page 11.

The Van Woert Scholarship Fund was established by the alumni of the School of Dental and Oral Surgery in 1940. The award is given annually to a Senior student in the dental school who stands high in scholastic attainments, in personal character, and in potentiality of being a credit to Columbia University and the dental profession.

A prize known as the Ella Maria Ewell Medal is awarded annually to the student of the School of Dental and Oral Surgery who, in the judgment of the Faculty, is most proficient in some subject of dentistry.

The Alumni Association makes an annual award of the Rowe-Wiberg Medal to the Senior student who has shown the greatest proficiency in prosthetic dentistry.

An annual award is made by the Sigma Epsilon Delta Fraternity to the graduating student who, in the opinion of the Faculty, shows the greatest promise.

The staff of the Division of Operative Dentistry has established an annual prize for excellence in operative dentistry.

Student Loans

Loan funds are provided in a limited amount for the assistance of students, but it is the general policy to grant loans only to students who have satisfactorily completed at

least one session of residence at the University. Application is made on a blank which may be obtained from the office of the Dean or of the Bursar. Applications for loans for the Winter Session should be filed by September 15; for the Spring Session, by January 15.

Student Employment

Owing to the heavy schedule of the Dental School, it is difficult for dental students to undertake outside part-time work during the academic year and, so far as practical, other financial arrangements should be made.

OFFICERS OF INSTRUCTION

- HAROLD A. ABRAMSON, *Assistant Clinical Professor of Physiology*; A.B., Columbia, 1920; M.D., 1923
- THOMAS H. ALLEN, *Associate Professor of Physiology*; A.B., Iowa, 1936; Ph.D., 1941
- FRANZ ALTMANN, *Associate Clinical Professor of Otolaryngology*; M.D., Vienna, 1925
- VIRGINIA APGAR, *Professor of Anesthesiology*; A.B., Mt. Holyoke, 1929; M.D., Columbia, 1933
- EDMUND APPLEBAUM, *Associate Professor of Dental Anatomy*; D.D.S., New York College of Dentistry, 1922
- HOWARD ARDEN, *Assistant Professor of Dentistry*; B.S., Fordham, 1943; D.D.S., Columbia, 1946
- HERBERT D. AYERS, JR., *Assistant Clinical Professor of Dentistry*; A.B., Columbia, 1929; D.D.S., 1931
- MARGARET W. BARNARD, *Associate Professor of Public Health Practice*; A.B., Smith, 1917; M.D., Cornell, 1923; D.P.H., Johns Hopkins, 1935
- HENRY A. BARTELS, *Assistant Professor of Oral Pathology*; B.S., Rhode Island State, 1917; B.S., Columbia, 1925; D.D.S., 1927
- HERBERT BARTELSTONE, *Assistant Professor of Pharmacology*; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945
- FRANK E. BEUBE, *Clinical Professor of Dentistry*; L.D.S., D.D.S., Toronto, 1930
- HAROLD W. BROWN, *Professor of Parasitology*; A.B., Kalamazoo, 1924; M.S., Kansas State, 1925; Sc.D., Johns Hopkins, 1928; M.D., Vanderbilt, 1933; D.P.H., Harvard, 1936
- JACK BUDOWSKY, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1943
- THEODORE BUNDRANT, *Associate Clinical Professor of Dentistry*; D.D.S., Howard, 1929
- LESTER R. CAHN, *Associate Professor of Oral Pathology*; D.D.S., New York College of Dentistry, 1918
- EDWARD A. CAIN, JR., *Associate Professor of Dentistry*; B.S., Fordham, 1942; D.D.S., Columbia, 1945
- NEAL W. CHILTON, *Assistant Professor of Dental Public Health Practice*; B.S., College of the City of New York, 1939; D.D.S., New York University, 1943; M.P.H., Columbia, 1946
- LOUIS J. CIZEK, *Assistant Professor of Physiology*; B.S., Fordham, 1937; M.D., Columbia, 1941
- E. GURNEY CLARK, *Professor of Epidemiology*; A.B., Vanderbilt, 1927; M.D., 1931; M.P.H., Johns Hopkins, 1936; D.P.H., 1944
- HANS T. CLARKE, *Professor of Biochemistry*; B.Sc., London, 1908; D.Sc., 1914
- LOUIS A. COHN, *Associate Clinical Professor of Dentistry*; D.D.S., Pennsylvania, 1928
- ROBERT W. COON, *Associate Professor of Pathology*; B.S., North Dakota, 1942; M.D., Rochester, 1944
- WILFRED M. COPENHAVER, *Professor of Anatomy*; A.B., Western Maryland, 1921; Ph.D., Yale, 1925
- JOSEPH A. CUTTITIA, *Assistant Professor of Dentistry*; A.B., Fordham, 1932; M.S., 1936; D.D.S., Columbia, 1939
- KOURKEN A. DAGLIAN, *Assistant Clinical Professor of Dentistry*; B.S., College of the City of New York, 1941; D.D.S., Columbia, 1943
- SAMUEL R. DETWILER, *Professor of Anatomy*; Ph.B., Yale, 1914; A.M., 1916; Ph.D., 1918; M.S. (hon.), 1931
- NICHOLAS DISALVO, *Assistant Professor of Physiology*; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1952
- ADOLPH ELWYN, *Associate Professor of Neuroanatomy*; B.S., Columbia, 1915; A.M., 1917
- EARL T. ENGLE, *Professor of Anatomy*; A.B., Nebraska Wesleyan, 1920; A.M., Colorado, 1924; Ph.D., Stanford, 1925
- BERNARD F. ERLANGER, *Assistant Professor of Microbiology*; A.B., College of the City of New York, 1943; A.M., New York University, 1949; Ph.D., Columbia, 1951
- JOHN W. FERTIG, *Professor of Biostatistics*; A.B., Ursinus, 1931; Ph.D., Minnesota, 1935
- JOSEPH E. FIASCONARO, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1943
- MORRIS FIERSTEIN, *Associate Clinical Professor of Dentistry*; D.D.S., Columbia, 1921
- LEWIS FOX, *Assistant Clinical Professor of Dentistry*; D.D.S., Maryland, 1927
- HARRY A. GALTON, *Associate Clinical Professor of Dentistry*; D.D.S., Columbia, 1932
- LEONARD J. GOLDWATER, *Professor of Occupational Medicine*; A.B., Michigan, 1924; M.D., New York University, 1928; Med.Sc.D., 1937; M.S.P.H., Columbia, 1941
- ROBERT GOTTSEGEN, *Assistant Clinical Professor of Dentistry*; A.B., Michigan, 1939; D.D.S., Columbia, 1943
- MAGNUS I. GREGERSEN, *Dalton Professor of Physiology*; A.B., Stanford, 1923; A.M., 1924; Ph.D., Harvard, 1930
- ROBERT E. HERLANDS, *Associate Professor of Dentistry*; A.B., Columbia, 1941; D.D.S., 1944
- MAURICE J. HICKEY, *Associate Dean (Dental and Oral Surgery)*; Professor of Oral Surgery; D.M.D., Harvard, 1932; M.D., Columbia, 1937
- GEORGE W. HINDELS, *Assistant Clinical Professor of Dentistry*; M.D., Vienna, 1938; D.D.S., Columbia, 1943
- LEONARD HIRSCHFELD, *Assistant Clinical Professor of Dentistry*; A.B., Columbia, 1941; D.D.S., 1944
- FRANKLIN HOLLANDER, *Assistant Clinical Professor of Physiology*; B.S., Columbia, 1919; Ph.D., 1923
- CALDERON HOWE, *Assistant Professor of Microbiology*; A.B., Yale, 1938; M.D., Harvard, 1942
- IRVIN L. HUNT, JR., *Associate Professor of Dentistry*; D.D.S., Pennsylvania, 1929
- ALVIN R. JACOBSON, *Associate Professor of Sanitary Science*; B.S., North Dakota, 1935; M.S., 1937; Ph.D., Iowa, 1941
- JAMES JAY, *Assistant Clinical Professor of Dentistry*; D.D.S., Pennsylvania, 1940
- DOROTHY D. JOHNSON, *Assistant Professor of Anatomy*; A.B., Bates, 1941; A.M., Vassar, 1943; Ph.D., Columbia, 1949
- ELVIN A. KABAT, *Professor of Microbiology*; B.S., College of the City of New York, 1932; A.M., Columbia, 1934; Ph.D., 1937
- MAXWELL KARSHAN, *Associate Professor of Biochemistry*; B.S., College of the City of New York, 1917; A.M., Columbia, 1920; Ph.D., 1925
- MORRIS KAVELLE, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1933
- LAWRENCE C. KOLB, *Professor of Psychiatry*; M.D., Johns Hopkins, 1934

- JOSEPH M. LEAVITT, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1940
- BARNET M. LEVY, *Professor of Dentistry*; A.B., Pennsylvania, 1938; D.D.S., 1942; M.S., Virginia, 1944
- GEORGE F. LINDIG, *Associate Clinical Professor of Dentistry*; D.D.S., Minnesota, 1924
- JOHN J. LUCCA, *Assistant Professor of Dentistry*; A.B., New York University, 1941; D.D.S., Columbia, 1947
- JOHN D. MACLENNAN, *Assistant Professor of Microbiology*; M.B., Ch.B., Aberdeen, 1934; M.D., 1939
- WILLIAM MILLER, *Assistant Clinical Professor of Dentistry*; B.S., Columbia, 1927; D.D.S., 1931
- WILLIAM J. MILLER, *Assistant Clinical Professor of Dentistry*; A.B., New York University, 1940; D.D.S., Columbia, 1943
- MELVIN MORRIS, *Assistant Clinical Professor of Dentistry*; B.S., College of the City of New York, 1934; A.M., Columbia, 1937; D.D.S., 1941
- WILLIAM L. NASTUK, *Assistant Professor of Physiology*; B.S., Rutgers, 1939; Ph.D., 1945
- ALVIN S. NATHAN, *Associate Clinical Professor of Dentistry*; D.D.S., Columbia, 1926; B.S., New York University, 1935; A.M., 1938
- JOHN L. NICKERSON, *Professor of Physiology*; B.A., Dalhousie, 1925; M.A., 1928; Ph.D., Princeton, 1935
- CARL R. OMAN, *Professor of Dentistry*; D.D.S., Minnesota, 1914
- ARMAND OPPENHEIMER, *Assistant Clinical Professor of Dentistry*; A.B., College of the City of New York, 1926; B.S., Columbia, 1927; D.D.S., 1929
- MAX A. PLEASURE, *Associate Clinical Professor of Dentistry*; D.D.S., Pennsylvania, 1928; M.S.P.H., Columbia, 1941
- WILLARD C. RAPPLEYE, *Dean, Faculty of Medicine; Vice President in Charge of Medical Affairs; Professor of Medical Economics*; A.B., Illinois, 1915; M.D., Harvard, 1918; A.M., Yale, 1922; Sc.D., Trinity (*hon.*), 1939; Rutgers (*hon.*), 1949; Med.Sc.D., Women's Medical College of Pennsylvania (*hon.*), 1950
- WILLIAM M. ROGERS, *Assistant Professor of Anatomy*; B.S., Georgia, 1921; Ph.D., Cornell, 1927
- WALTER S. ROOT, *Professor of Physiology*; B.S., Wesleyan, 1924; Ph.D., Pennsylvania, 1930
- HARRY M. ROSE, *John E. Borne Professor of Medical and Surgical Research*; A.B., Yale, 1928; M.D., Cornell, 1932
- GEORGE ROSEN, *Professor of Public Health Education*; B.S., College of the City of New York, 1930; M.D., Berlin, 1935; Ph.D., Columbia, 1944; M.P.H., 1947
- SOLOMON N. ROSENSTEIN, *Professor of Dentistry*; B.S., College of the City of New York, 1929; D.D.S., Columbia, 1930
- FRED ROTHENBERG, *Assistant Clinical Professor of Dentistry*; D.M.D., Goettingen, Germany, 1935; D.D.S., Pennsylvania, 1937
- LOUIS A. SAPORITO, *Assistant Clinical Professor of Dentistry*; D.D.S., College of Dental and Oral Surgery of New York, 1922
- WILLIAM J. SAVOY, *Clinical Professor of Dentistry*; B.S., Manhattan, 1931; D.D.S., Columbia, 1935
- SAUL SCHLUGER, *Associate Clinical Professor of Dentistry*; D.D.S., Louisville, 1931
- JOSEPH SCHROFF, *William Carr Professor of Oral Surgery*; B.S., College of the City of New York, 1909; M.D., Columbia, 1920; D.D.S., 1922
- L. LASZLO SCHWARTZ, *Clinical Professor of Dentistry*; B.S., College of the City of New York, 1927; D.D.S., Columbia, 1938
- BEATRICE C. SEEGAL, *Associate Professor of Microbiology*; A.B., California, 1918; A.M., 1921; M.D., Johns Hopkins, 1924
- HARRY H. SHAPIRO, *Assistant Professor of Anatomy*; D.M.D., Tufts, 1918
- HAROLD SHERMAN, *Assistant Clinical Professor of Dentistry*; B.S., College of the City of New York, 1935; D.D.S., Michigan, 1946
- WILLIAM H. SILVERSTEIN, *Assistant Clinical Professor of Dentistry*; D.D.S., Maryland, 1937
- GEORGE K. SMELSER, *Professor of Anatomy*; A.B., Earlham, 1929; Ph.D., Chicago, 1932
- GILBERT P. SMITH, *Professor of Dentistry*; D.D.S., Minnesota, 1927
- HARRY P. SMITH, *DeLafield Professor of Pathology*; A.B., California, 1916; M.S., 1918; M.D., 1921
- WILLIAM C. SPRING, *DeLamar Professor of Public Health Practice*; M.D., Duke University, 1936; M.P.H., Columbia, 1947
- LEO STERN, Sr., *Clinical Professor of Dentistry*; D.D.S., New York College of Dentistry, 1912
- WELLINGTON B. STEWART, *Associate Professor of Pathology*; B.S., Notre Dame, 1942; M.D., Rochester, 1945
- FRANCES A. STOLL, *Associate Professor of Dental Hygiene*; R. D. H., Columbia, 1934; B.S., 1944; A.M., 1945; Ed.D., 1949
- LEWIS R. STOWE, *Professor of Dentistry*; D.D.S., Minnesota, 1916
- DAVID TANCHESTER, *Clinical Professor of Dentistry*; D.D.S., New York University, 1921
- ARTHUR C. TOTTEN, *Professor of Dentistry*; D.D.S., Pennsylvania, 1926
- FERDINAND A. TUOTI, *Assistant Clinical Professor of Dentistry*; D.M.D., Harvard, 1928
- HARRY B. VAN DYKE, *Hosack Professor of Pharmacology*; B.S., Chicago, 1918; Ph.D., 1921; M.D., Rush, 1923
- WILLIAM A. VERLIN, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1931
- WILLIAM W. WALCOTT, *Associate Professor of Physiology*; A.B., Yale, 1933; Ph.D., Columbia, 1944
- SHIH-CHUN WANG, *Professor of Physiology*; B.S., Yenching, 1931; M.D., Peiping Union Medical College, 1935; Ph.D., Northwestern, 1940
- CLIFFORD L. WHITMAN, *Assistant Clinical Professor of Dentistry*; D.D.S., Maryland, 1927
- EVELYN WITOL, *Assistant Clinical Professor of Dentistry*; D.M.D., Tufts, 1945
- EDWARD V. ZEGARELLI, *Associate Professor of Dentistry*; A.B., Columbia, 1934; D.D.S., 1937; M.S., Chicago, 1943
- SEYMOUR ALGUS, D.D.S., *Assistant in Dentistry*
- JACK ALLOY, D.D.S., *Instructor in Dentistry*
- BERT BALLIN, D.D.S., *Assistant in Dentistry*
- CARLISLE C. BASTIAN, D.D.S., *Lecturer in Dentistry*
- SAM M. BEISER, Ph.D., *Associate in Microbiology*
- JAMES W. BENFIELD, D.D.S., *Instructor in Dentistry*
- MARC L. BERG, D.D.S., *Assistant in Dentistry*
- GERALD H. BESEN, D.D.S., *Assistant in Dentistry*

¹ On leave 1955-1956 (military service).

- ABRAHAM M. BLECHMAN, D.D.S., *Assistant in Dentistry*
 PAUL BRAZEAU, Ph.D., *Associate in Pharmacology*
 SEBASTIAN A. BRUNO, D.M.D., *Assistant in Dentistry*
 STANISLAW H. BRZUSTOWICZ, D.D.S., *Instructor in Dentistry*
 SKAIDRITE BURKEVICS, R.D.H., *Assistant in Dental Hygiene*
 BARBARA CARROLL, R.D.H., *Instructor in Dental Hygiene*
 JAMES P. CATTELL, M.D., *Research Associate in Psychiatry*
 BERNARD S. CHAIKIN, D.M.D., *Lecturer in Dentistry*
 CHARLES M. CHAYES, D.D.S., *Assistant in Dentistry*
 GEORGE B. CROZAT, D.D.S., *Lecturer in Dentistry*
 KENNETH C. DEESEN, D.D.S., *Instructor in Dentistry*
 JOSEPH C. DE LISI, D.D.S., *Instructor in Dentistry*
 ROBERT DRELICH, D.D.S., *Assistant in Anatomy*
 JOSEPH D. EBY, D.D.S., *Lecturer in Dentistry*
 SOLON A. ELLISON, D.D.S., *Associate in Microbiology*
 ROBERT L. FISHER, D.D.S., *Assistant in Dentistry*
 HERBERT P. FRITZ, D.D.S., *Instructor in Dentistry*
 ROGER G. GERRY, D.M.D., *Research Assistant in Dentistry*
 HERMAN GLADSTONE, M.D., *Instructor in Anatomy*
 BENJAMIN W. GLICK, M.D., *Instructor in Anatomy*
 HENRY M. GOLDMAN, D.M.D., *Lecturer in Dentistry*
 IDA M. GOLOMB, D.D.S., *Instructor in Dentistry*
 AXEL HANSON, *Instructor in Dental Technique*
 HAROLD R. HARLAN, D.D.S., M.P.H., *Lecturer in Dentistry*
 STANLEY S. HELLER, D.D.S., *Instructor in Dentistry*
 FREDERICK G. HOFMANN, Ph.D., *Associate in Pharmacology*
 MARGARET HOLDEN, Ph.D., *Associate in Microbiology*
 SIDNEY L. HOROWITZ, D.D.S., *Research Associate in Dentistry*
 ELLEN N. HOSIOSKY, D.M.D., D.D.S., *Instructor in Dentistry*
 CHRISTIAN A. HOVDE, A.M., *Instructor in Anatomy*
 ROBERT J. HUETTNER, D.D.S., *Research Assistant in Dentistry*
 RUTH K. INNES, R.D.H., *Assistant in Dental Hygiene*
 JOSEPH E. JOHNSON, D.D.S., *Lecturer in Dentistry*
 SOLOMON L. KATZ, D.D.S., *Research Assistant in Dentistry*
 BERTRAM KLATSKIN, D.D.S., *Instructor in Dentistry*
 ALICE W. KNOX, Ph.D., *Instructor in Microbiology*
 ANN R. KOTSUBE, R.D.H., *Assistant in Dental Hygiene*
 SKAIDRITE C. KRESLINS, R.D.H., *Assistant in Dental Hygiene*
 ROBERT G. KROLL, D.D.S., *Assistant in Dentistry*
 PHILIP KUTNER, D.D.S., *Assistant in Dentistry*
 AUSTIN H. KUTSCHER, D.D.S., *Research Associate in Dentistry*
 GERTRUDE T. LEE M.S., *Lecturer in Dental Hygiene*
 JESSE L. LEFCOURT, D.D.S., *Instructor in Dentistry*
 HENRY P. LEVY, D.D.S., *Assistant in Anatomy*
 EVALD LINDER, *Instructor in Dental Technique*
 JULIUS K. LITTMAN, M.D., *Instructor in Anatomy*
 FRANCIS J. LOUGHLIN, D.D.S., *Instructor in Dentistry*
 JOSEPH LUBAN, D.D.S., *Research Assistant in Dentistry*
 EDWARD S. LUBOJA, D.D.S., *Instructor in Dentistry*
 MARTIN LUNIN, D.D.S., *Instructor in Oral Pathology*
 GEORGE V. LYONS, D.D.S., *Assistant in Dentistry*
 HARRIET G. McCORMICK, Ph.D., *Lecturer in Dental Hygiene*
 IRWIN D. MANDEL, D.D.S., *Instructor in Dentistry*
 JOSEPH J. MARTINI, D.D.S., *Assistant in Dentistry*
 ARTHUR H. MERRITT, D.D.S., Sc.D., *Lecturer in Dentistry*
 HENRY MILCH, M.D., *Instructor in Anatomy*
 SAUL MISHELOFF, D.D.S., *Lecturer in Dentistry*
 HOWARD B. MOSHMAN, D.D.S., *Assistant in Dentistry*
 HENRY I. NAHOUM, D.D.S., *Research Assistant in Dentistry*
 IRVING J. NAIDORF, D.D.S., *Instructor in Dentistry*
 BERNARD NATHANSON, D.D.S., *Assistant in Dentistry*
 HANS H. NEUMANN, M.D., *Research Assistant in Dentistry*
 BISSELL B. PALMER, D.D.S., *Research Associate in Administrative Medicine*
 JOHN D. PIRO, D.D.S., *Instructor in Dentistry*
 CURT PROSKAUER, D.M.D., *Curator of the Museum, Dental and Oral Surgery*
 JOSEPH RANDI, D.D.S., *Assistant in Dentistry*
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¹ On leave 1955-1956 (military service).

² On leave 1955-1956.

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 ROBIN M. RANKOW, D.D.S., M.D., *Assistant Attending Surgeon*

¹ On leave 1955-1956 (military service).

² On leave 1955-1956.

CONDENSED ACADEMIC CALENDAR

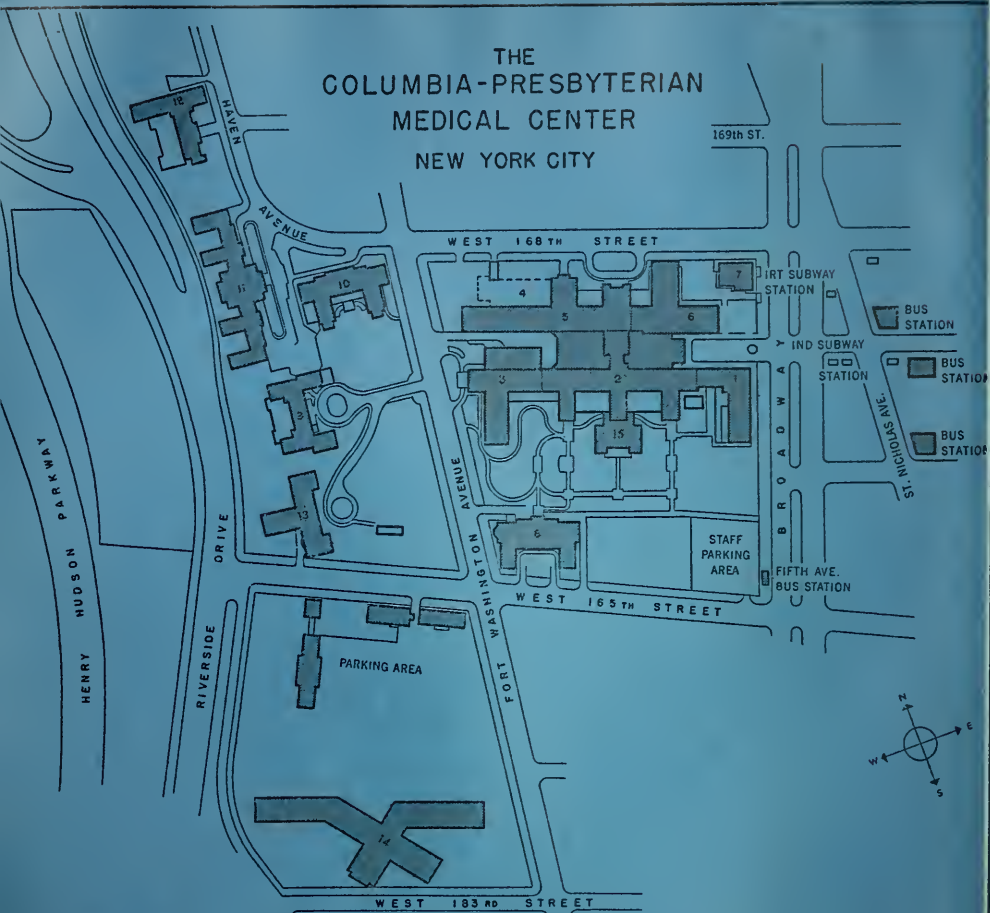
1955

- September 6 Tuesday, and September 7, Wednesday. Registration, including payment of fees.
- September 12** Monday. Classes begin.
- November 8 Tuesday. Election Day. Holiday.
- November 24 Thursday. Thanksgiving Day. Holiday.
- November 26 Saturday. End of first trimester.
- November 28 Monday. Beginning of second trimester.
- December 19** Monday, through

1956

- January 2 Monday. Christmas Holidays.
- February 22 Wednesday. Washington's Birthday. Holiday.
- February 25 Saturday. End of second trimester.
- February 27 Monday. Beginning of third trimester.
- March 1 Thursday. Last day for filing application or renewal of application for all degrees and certificates, except doctoral degrees, to be conferred in June. The privilege of later application may be granted on payment of a late fee.
- March 25 Sunday, through April 1, Sunday. Easter Holidays.
- May 19 Saturday. Last day of classes.
- May 21 Monday, through May 31, Thursday. Final examinations.
- May 30 Wednesday. Memorial Day. Holiday.
- June 5 Tuesday. Conferring of degrees.

THE COLUMBIA-PRESBYTERIAN MEDICAL CENTER NEW YORK CITY



- | | |
|---|--|
| 1. BABIES HOSPITAL | 8. INSTITUTE OF OPHTHALMOLOGY |
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| 10. SCHOOL OF DENTAL AND ORAL SURGERY | |
| 11. N. Y. CITY DEPT. OF HEALTH | |
| 12. SCHOOL OF PUBLIC HEALTH AND ADMINISTRATIVE MEDICINE | |

COLUMBIA UNIVERSITY

Bulletin of Information SERIES FIFTY-SIX

NUMBER TWENTY-TWO • JUNE 2, 1956

ANNOUNCEMENT OF THE

School of STACKS
Dental and Oral Surgery COLUMBIA UNIVER.
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1956-1957



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Columbia University Bulletin of Information

Fifty-sixth Series, No. 22

June 2, 1956

Issued at Columbia University, Morningside Heights, New York 27, N.Y., weekly from January for forty-six consecutive issues. Reentered as second-class matter August 15, 1952, at the Post Office at New York, N.Y., under the Act of August 24, 1912. Acceptance for mailing at a special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized.

The series includes the report of the President to the Trustees and the announcements of the several colleges and schools relating to the work of the next year. These are made as accurate as possible, but the right is reserved to make changes in detail as circumstances require. The current number of any of these announcements will be sent upon written application to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N.Y. Copies may be obtained in person from the Office of the Secretary, 213 Low Memorial Library.

C. U. P. 5,200—1956

Communications

All communications regarding the School of Dental and Oral Surgery, applications for admission, and appointments for personal interviews should be addressed to the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.; telephone: WAdsworth 3-2500.

Announcements

The announcements of each college or school and of the Summer Session may be obtained without charge by writing to the Office of University Admissions.

Letters requesting more detailed information than is contained in this announcement and all correspondence regarding admission should be addressed to the Dean, School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.

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THE SCHOOL OF DENTAL AND ORAL SURGERY

Columbia University was founded in 1754 as King's College by royal grant of George II, King of England, "for the Instruction of Youth in the Learned Languages, and the Liberal Arts and Sciences." The Revolutionary War interrupted its active work, but In 1784 it was reopened as Columbia College. In 1912 the title was changed to Columbia University in the City of New York.

In May, 1916, the University issued a pamphlet entitled *A Dental School on University Lines*. In this pamphlet the University stated its intent to establish a school of dentistry in affiliation and coordination with the School of Medicine. The pamphlet's introductory statement outlined the University's policy for dental education which has been consistently followed: "Dentistry and Dental Education are on the threshold of extraordinary development but are unable to take advantage of their opportunities because of the traditional separation of dentistry and medicine. Dentistry has been shown by recent investigation and research to be logically a branch of general medicine."

In September, 1916, students in dentistry were admitted to courses in Columbia University at the School of Medicine. On March 5, 1917, the Trustees of the University established a school of dentistry as of September 27, 1916, and the School of Dentistry became an integral part of the University. On July 1, 1923, the College of Dental and Oral Surgery of New York (organized in 1905) was merged with the School of Dentistry, and the combined institutions named the School of Dental and Oral Surgery of Columbia University.

In September, 1928, the school was moved to the Columbia University-Presbyterian Hospital Medical Center, where the dental department of the School occupies three floors. The fundamental science subjects, which are given to both dental and medical students, are taught in the adjoining College of Physicians and Surgeons, the corridors of the two schools being continuous. In adjacent wings, the halls of which are also continuous with those of the school, the wards and outpatient departments of the Presbyterian and associated hospitals are located, thus giving the closest possible contact and association with all branches of health service. The Dental School clinic includes as one of its functions the dental care of the patients of the Medical Center hospitals.

In order to strengthen the instruction of dental and medical students and to fulfill a further step in the integration of dental education and research with the medical program at the Columbia-Presbyterian Medical Center which was visualized when the Dental School was made a part of the Center in 1928, the faculties of the two schools were merged July 1, 1945. This faculty is responsible for the educational programs in medicine, dentistry, public health, and nursing. A committee on dental education, established by University statute, of which a majority is from the Department of Dental and Oral Surgery and of which the Associate Dean for Dental and Oral Surgery is the chairman, initiates recommendations to the faculty on the qualifications and admission requirements for dental students, the curriculum of instruction, the candidates for the degree of Doctor of Dental Surgery, and other educational matters dealing with dentistry.

The course in dentistry covers four academic years and leads to the degree of Doctor of Dental Surgery. The greater part of the first two years of the curriculum is taken in the fundamental science departments of instruction in the University, which are integral parts of the College of Physicians and Surgeons and the School.

ADMISSION, REGISTRATION, AND FEES

ADMISSION TO THE FIRST YEAR

Application. It is desirable that candidates make application during the academic year preceding that for which they seek admission. It is not necessary to complete the academic requirements before making application. However, all requirements must be completed before matriculation. Application blanks will be furnished by the Office of the Committee on Admissions of the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application should be accompanied by a check or money order for \$5.00, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable.

The minimum requirement for admission to the first-year class is the satisfactory completion of three full years at an acceptable college of arts and sciences, which must include the satisfactory completion of the following courses required by the New York State Board of Regents:

	<i>Semester Hours</i>
English composition and literature	6
Physics	6
Biology	6
Chemistry (inorganic)	6
Chemistry (an approved course in organic chemistry)	6

A point or semester hour is the equivalent of one hour of lecture or recitation plus two hours of outside work or three hours of laboratory work per week, per semester. Suitable laboratory work must be included in each of the courses in science.

Inasmuch as an understanding of the biological sciences is based upon the knowledge of the underlying sciences of chemistry, physics, and biology, students are urged, so far as time permits, to take additional courses in quantitative, qualitative, physical, and organic chemistry, physics, comparative anatomy, and other advanced courses in biology, as well as courses in mathematics, German and French, sociology, history, and other subjects of general cultural and scientific value. Courses in fine and industrial arts are also useful.

Owing to the limited number of students who can be accommodated, completion of the requirements for entrance does not guarantee admission. The entire college record of each student is carefully examined by the Committee on Admissions in order that those who are judged most capable of meeting the exacting demands of the course and of the profession of dentistry may be selected. Preference will be given in the selection of students to those who present to the Committee on Admissions evidence of high achievement in selected college courses of special predental value and who, in the opinion of the Committee on Admissions, are most likely to succeed in dentistry, rather than to those who present the largest number of course credits or those who have limited their preparation to the prescribed subjects. Acceptance of a student for admission is based on grounds of character and health as well as on the fulfillment of academic requirements.

An acceptance fee of \$50 is payable within two weeks after notification of acceptance (see page 6).

All applicants will be required to take the Dental Aptitude Tests conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

COMBINED COURSES

Combined courses with Columbia College. Upon receiving ninety-four points of credit, sixty-four of which must be for work in Columbia College, including all the work prescribed for the degree of Bachelor of Arts in Columbia College, a student may take studies in the first year of the School of Dental and Oral Surgery, provided he can satisfy the stated requirements and is accepted for admission therein, and will receive the degree of Bachelor of Arts from Columbia College upon the satisfactory completion of the year's work. No course may be counted toward a professional degree and at the same time be included among those which go to make up the ninety-four points referred to above. This combined course with Columbia College is being discontinued for students entering Columbia College in September, 1954, and thereafter.

Combined courses with Barnard College. Students from Barnard College may exercise the professional option after the completion of ninety points of academic work, including all grouped work and a major of twenty-eight points unless this number is reduced in individual cases by special permission of the Committee on Instruction of Barnard College.

Combined courses with the School of General Studies. Students from the School of General Studies may exercise the professional option after the completion of ninety-four points, including all the courses prescribed for the Bachelor of Science degree, not less than sixty-four of which have been received for work in Columbia University.

Combined courses in dentistry and medicine. It is usually possible for a graduate of a registered medical school with the degree of Doctor of Medicine to meet the requirements of the school and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one summer session.

ADMISSION OF FOREIGN STUDENTS

The State Department of Education has special requirements with which students who are not citizens of this country must comply. Any foreign student desiring to apply to the School of Dental and Oral Surgery should communicate with the Dean.

REGISTRATION

Before attending University courses, every student must present himself at the Office of the Registrar, file a registration blank giving such information as may be required and pay his fees. The periods set aside for registration in each session are stated in the Academic Calendar. Registration at a later date is permitted only with the written permission of the Dean, satisfactory cause for the delay having been shown.

FEES

The University statutes provide that tuition fees and the University fee are payable semi-annually in advance. As stated above, payment of fees is the last step in the registration procedure; checks should be drawn to the order of Columbia University.

No reduction is made for late registration. If fees are paid after the last day of registration (see the Academic Calendar), a statutory charge of \$3.00 is automatically imposed.

The following annual fees for the full program for a candidate for the D.D.S. degree are prescribed by statute and are subject to change at any time at the discretion of the Trustees. The fees to be paid by students who are not enrolled for the full program will be assessed by the Registrar as provided by the University statutes.

6 • FEES

University fee	\$ 48.00
Tuition fee	900.00
Student health service fee	
This fee will be used to pay the annual premium of the Associated Hospital Service of New York for hospital insurance (unless the student is already covered by hospital insurance) and to pay part of the cost of the student health service	
	25.00
Instrument case rental (for sophomores, juniors, and seniors)	5.00
<hr/>	
Application fees	
For processing application for admission	5.00
For each deficiency or special examination	10.00
For renewal of application for a degree*	1.00
Late fees	
For late registration	3.00
For late application for a deficiency or special examination	5.00
For late application, or renewal of application, for a degree	5.00

Rebates

The University fee, the student health service fee, application fees, and late fees are not subject to rebate. If a student withdraws from the University, a partial return of tuition fees may be authorized by the Registrar. When a rebate is allowed, it will be reckoned from the day on which the Registrar receives written notice from the student.

Undue breakage

While no deposit is required of students to cover laboratory material and ordinary breakage, any unusual amount of breakage will be charged.

Acceptance fee. Within one week after an applicant has been notified that his application has been accepted, he must notify the Dean that he intends to matriculate and accompany his communication with a check or money order for \$50, payable to Columbia University. This acceptance fee will belong to the University and if the applicant does not register at the school for the specific session, it will not be returned. If he registers at the school at the next enrollment of entering students, the amount of the acceptance fee will be deducted from his tuition fees for that session.

Fees for repeated courses. Students obliged to repeat the work for any year are required to pay the full tuition fee.

DENTAL EQUIPMENT

Instruments and supplies. Each student is required to supply himself with instruments as specified in the official instrument list. The purchase from the University of instruments in original package outfits has been made compulsory, and unauthorized or

* An application for a degree, other than the several doctoral degrees, terminates at the next regular time for the issuance of diplomas subsequent to the date of filing; but under conditions prescribed by the respective faculties it may be subject to renewal for a fee of \$1.00 each time that a candidate chooses to come up for consideration.

incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. The students will not be allowed to purchase more than is required to complete a case. The quantity and quality are selected with a view to the best possible results and conservation of the student's best interests.

Microscopes. All students entering the School of Dental and Oral Surgery are required to provide themselves with microscopes of a satisfactory type. A microscope of standard make fitted with the following attachments will fill the requirements:

- a. Triple nosepiece.
- b. Abbe or variable focus condenser.
- c. 10x and 6x oculars.
- d. 16 mm. and 4 mm. objectives.
- e. Oil immersion lens.

Lockers. Each student will be assigned a locker on entering and will be required to use a combination lock as prescribed by the school.

ESTIMATED EXPENSES

An itemized estimate of the average expenses of a full-time student for an academic year in the School of Dental and Oral Surgery exclusive of travel, clothing, amusements, charity, organizations, and sundries is given below. These items are, of course, variable but should not be overlooked in estimating the total expense. The tuition, room, board, books, and laundry figures are based upon rates which prevailed during 1955-1956 and can be accepted as applicable in general for the year 1956-1957 unless national economic changes require their alteration.

	<i>Average</i>	<i>Minimum</i>
Tuition fee	\$ 900	\$ 900
Miscellaneous fees	78	78
Room	330	225
Board	600	500
Books	150	115
Instruments (see below)	400	400
Laundry	75	35
	<hr/>	<hr/>
	\$2,533	\$2,253

These estimates are subject to correction as the basic prices of supplies and instruments change. Instruments are to be paid for at the opening of the academic year. The greatest part of the total instrument cost is incurred in the sophomore year. The cost of books will vary, depending upon the choice made from the selection offered.

PLAN OF INSTRUCTION

The curriculum is arranged with the object of providing the student with the necessary opportunities for acquiring a knowledge of the fundamental sciences in relation to dentistry and the techniques of approach in dental problems. Beginning in the first two academic years with a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology, the student prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skills required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of the dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by means of the division of classes into small sections, conferences, and the comprehensive case method of instruction.

<i>Subjects*</i>	<i>Class Hours</i>	<i>Lab. or Clin. Hours</i>	<i>Total Hours</i>
FIRST YEAR			
Anatomy			
Embryology 152 <i>F</i>	18		18
Gross 151 <i>FS</i>	50	222	272
Microscopic 150 <i>FS</i>	42	126	168
Neuro 153 <i>T</i>	30	36	66
Oral 101 <i>ST</i>	19	82	101
Biochemistry 150 <i>ST</i>	38	117	155
Histology, Oral 115 <i>ST</i>	25	52	77
Physiology 150 <i>FS</i>	56	152	208
Theory and Practice			
Dental History 287 <i>T</i>	10		10
<i>Total</i>			1,075
SECOND YEAR			
Crown and Bridge 105 <i>ST</i>	20	184	204
Dental Materials 126 <i>FS</i>	10	56	66
Microbiology 151 <i>F</i> and 152 <i>F</i>	43	99	142
Operative Dentistry 131 <i>FST</i>	20	187	207
Pathology 150 <i>FS</i>	54	141	195
Periodontology 151 <i>T</i>	10	44	54
Pharmacology 150 <i>ST</i>	55	33	88
Prosthetic Dentistry 157 <i>FST</i>	20	198	218
Psychiatry 150 <i>S</i>	11		11
Surgery, Principles 168 <i>ST</i>	10		10
Surgery, Oral 270A <i>ST</i>	10		10
Theory and Practice			
Therapeutics 286 <i>T</i>	10		10
<i>Total</i>			1,215

* Letter following course number designates trimester: *F* = first, *S* = second, and *T* = third.

<i>Subjects*</i>	<i>Class Hours</i>	<i>Lab. or Clin. Hours</i>	<i>Total Hours</i>
THIRD YEAR			
Anatomy, Maxillofacial 252 S	10		10
Crown and Bridge Technique 205 F		96	96
Clinic 206 ST	10	114	124
Applied Occlusal Dynamics 212 T		30	30
Diagnosis 212 FST	30	25	55
Operative Dentistry 233 FST	10	276	286
Orthodontics 241 F	20	60	80
Pathology, Oral 246 FS	20	60	80
Periodontology 251 S		30	30
Practice of Medicine 278 ST	40	22	62
Prosthetic Dentistry 260 FST and 261 FST	20	177	197
Radiology 267 F	10	15	25
Surgery, Oral 270B F	10	20	30
<i>Total</i>			<i>1,105</i>
FOURTH YEAR			
Crown and Bridge 210 FST and 211 FST	10	165	175
Diagnosis 213 F		25	25
Diagnosis Seminar 214 S		30	30
Diagnosis 215 T (continuation of 214)	10		10
Orthodontics 242 FST		30	30
Operative Dentistry 234 FST	20	305	325
Pedodontics 202 FST	10	87	97
Periodontology 252 FS and 253 FS	20	30	50
Prosthetic Dentistry 263 FST and 264 FST	10	165	175
Public Health 222 S	20		20
Surgery, Oral 272 FST	40	60	100
Surgery Seminar 274 T	10		10
Surgical Prosthesis 265 T		30	30
Theory and Practice Clinical Oral Physiology 283 F	10		10
Ethics, Jurisprudence and Practice Ad- ministration 281 FST	30		30
Comprehensive 285 T			
<i>Total</i>			<i>1,117</i>

* Letter following course number designates trimester: F = first, S = second, and T = third.

COURSES OF INSTRUCTION

For purposes of instruction the work of each academic year is scheduled in three sessions of eleven weeks each, which are designated as First, Second, and Third Trimesters.

For a detailed statement of the content of each course, the student is referred to the departmental statements which follow.

The outline on pages 8 and 9 shows the work required of a candidate for the degree of Doctor of Dental Surgery. The University reserves the right to make such changes in the program of studies at any time as experience may prove desirable.

ANATOMY

Anatomy 101—Oral anatomy. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Anatomy 115—Oral histology and embryology. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150—Microscopic anatomy. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as *Anatomy 101F* in the Medical School.

Anatomy 151—Gross anatomy. Freshman year.

Lectures, conferences, and laboratory.

Anatomy 152—Embryology. Freshman year.

Lectures and demonstrations dealing with the dynamics of vertebrate development, with particular reference to mammals and man.

Anatomy 153—Neuroanatomy. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to *Anatomy 106S* in the Medical School.

Anatomy 252—Maxillofacial anatomy. Junior year.

Lectures and demonstrations. A review course with special application to the problems of the major fields of dentistry.

BIOCHEMISTRY

Biochemistry 150—Introductory biochemistry. Freshman year.

Lectures and laboratory. A study of the chemistry of life processes with special reference to the animal organism.

DENTAL MATERIALS

Dental Materials 126—Physical properties of dental materials. Sophomore year.

Lectures and laboratory on the physical and chemical properties of the metals and other materials used in dentistry, with clinical applications.

DIAGNOSIS

Diagnosis 212—Dental diagnosis lectures and clinic. Junior year.

Lectures and clinical practice in diagnostic procedures, comprehensive diagnosis, pulp symptomatology, radiographic interpretation, and diagnosis of lesions and diseases of the oral cavity.

Diagnosis 213—Dental diagnosis clinic. Senior year.

Continuation of clinic of *Diagnosis 212*.

Diagnosis 214—Diagnosis seminar. Senior year.

Discussion and differential diagnosis of diseases of the oral cavity.

Diagnosis 215—Diagnosis seminar. Senior year.

Continuation of *Diagnosis 214*.

MEDICINE

Medicine 278—General survey of medicine. Junior year.

Lectures and conferences covering phases of general medicine; also clinics in which patients are studied for conspicuous manifestations of systemic conditions and their significance.

MICROBIOLOGY

Microbiology 151—General medical microbiology and immunology. Sophomore year.

Lectures, conferences, and laboratory.

Microbiology 152—Principles of microbiology, immunology, and epidemiology. Sophomore year.

This course is identical with *Microbiology 105F* in the Medical School except that lectures on the mouth bacteria are substituted for several of those of the medical series.

OPERATIVE DENTISTRY

Operative Dentistry 131—Elements of operative dentistry. Sophomore year.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233—Operative clinical practice. Junior year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234—Advanced clinical practice. Senior year.

A continuation in lectures and clinic of *Operative Dentistry 233* with the consideration of special problems in operative practice, including endodontia.

ORTHODONTICS

Orthodontics 241—Principles of orthodontics. Junior year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion in orthodontics by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and constructing of removable appliances used as space maintainers and habit breakers and to correcting tooth alignment in preparation for restorative dentistry and treatment of periodontal conditions. Clinical practice in the use of appliances constructed in the laboratory.

Orthodontics 242—Orthodontic clinic. Senior year.

Clinical orthodontics.

PATHOLOGY

Pathology 150—General and special pathology. Sophomore year.

A study of important pathological conditions, demonstrated by museum specimens and a very complete series of histological preparations.

Pathology 246—Oral pathology. Junior year.

Lectures, conferences, and laboratory work on the diseases of the jaws, mouth, and teeth.

12 • COURSES OF INSTRUCTION

Pathology 247—Oral pathology seminar. Senior year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS

Pedodontics 202—Pedodontics lectures and clinic. Senior year.

Lectures, conferences, and clinical practice relating to operative dental procedures for children, management of child dental patients, and application of present knowledge of dental development and preventive dentistry.

PERIODONTOLOGY

Periodontology 151—Periodontia clinic. Sophomore year.

Lectures and clinics on dental prophylactic technique and early disturbances of the periodontium.

Periodontology 251—Periodontia clinic. Junior year.

Lectures and clinics in the diagnosis and treatment of periodontal diseases.

Periodontology 252—Periodontology lectures. Senior year.

Lectures and conferences on the theory and practice of periodontology and periodontal histopathology.

Periodontology 253—Periodontia clinic. Senior year.

Work in clinics in the diagnosis and treatment of advanced periodontal diseases.

PHARMACOLOGY

Pharmacology 150—Pharmacology. Sophomore year.

Lectures, conferences, and laboratory. In this course the pharmacological action of drugs on man and lower animals is studied.

PHYSIOLOGY

Physiology 150—Mammalian physiology. Freshman year.

Lectures, conferences, and laboratory.

PROSTHETIC DENTISTRY

Prosthetics 105—Crown and bridge lectures and technique. Sophomore year.

Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.

Prosthetics 157—Prosthetic lectures and technique. Sophomore year.

Lectures and technical procedures in full and partial denture construction.

Prosthetics 205—Crown and bridge lectures and technique. Junior year.

Lectures on the clinical procedures in crown and bridgework.

Prosthetics 206—Crown and bridge clinic. Junior year.

Clinical construction of elementary crown and bridgework.

Prosthetics 210—Crown and bridge lectures. Senior year.

Lectures and conferences on various types of bridgework.

Prosthetics 211—Crown and bridge clinic. Senior year.

Clinical construction of crown and bridgework.

Prosthetics 212—Applied occlusal dynamics. Junior year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260—Prosthetic lectures. Junior year.

Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.

Prosthetics 261—Prosthetic clinic. Junior year.

Clinical construction of full and partial dentures.

Prosthetics 263—Prosthetic clinic. Senior year.

Clinical construction of full and partial dentures.

Prosthetics 264—Prosthetic lectures. Senior year.

A series of lectures on clinical considerations in partial denture diagnosis, design, and construction.

Prosthetics 265—Surgical prosthesis. Senior year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

PSYCHIATRY

Psychiatry 10—Psychiatry for the dentist. Sophomore year.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH

Public Health 222—Principles of public health. Senior year.

Survey course in the theory and practice of preventive medicine, dentistry, and public health. Fundamental principles of administration, statistics, epidemiology, industrial hygiene, and sanitation. The principles and problems of dental health practice are emphasized.

RADIOLOGY

Radiology 267—Oral radiology practice. Junior year.

Lectures, readings, and discussions on topics relative to oral radiology.
Practice in exposing, processing, and mounting dental radiographs.

SURGERY

Surgery 168—Principles of surgery. Sophomore year.

Lectures, seminars, and basic principles of general surgery.

Surgery 270A—Oral surgery. Sophomore year.

Lectures and seminars on local anesthesia and removal of teeth.

Surgery 270B—Oral surgery. Junior year.

Demonstration, lectures, and clinical practice in local anesthesia and the removal of teeth.

Surgery 272—Oral surgery. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia.
Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274—Oral surgery seminar. Senior year. Required.

Lectures and seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation.

THEORY AND PRACTICE OF DENTISTRY

Theory and Practice 281—Dental ethics, jurisprudence, and practice administration. Senior year.

Lecture and conference course on dental ethics, jurisprudence, economics, office conduct, and practice management.

Theory and Practice 283—Clinical oral physiology. Senior year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and clinical conferences.

Theory and Practice 285—Comprehensive case. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of X-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 286—Therapeutics. Sophomore year.

Lectures and conferences on drugs and other therapeutic agents used in dentistry.

Theory and Practice 287—Dental history. Freshman year.

Lectures and conferences on the development of the scientific and technical principles of modern dentistry.

TEXTBOOKS

The following list includes most of the books normally used. As a rule, only the latest editions of the textbooks should be purchased. Students are warned against buying any books until specifically advised by the departments concerned.

ANATOMY. GROSS ANATOMY: One of the following three: Gray's *Anatomy*; Cunningham, *Textbook of Anatomy*; or Morris, *Human Anatomy*. One of the following three dictionaries: Stedman, Gould, or Dorland's American; Cunningham, *Manual of Practical Anatomy*, Vols. II and III. One of the following four: Grant, *Atlas of Anatomy*; Truex and Kellner, *Detailed Atlas of the Head and Neck*; Spalteholz, *Hand Atlas of Human Anatomy*; or Anson, *Atlas of Human Anatomy*.

MAXILLOFACIAL ANATOMY: Shapiro, *Applied Anatomy of the Head and Neck* (1954 ed.).

EMBRYOLOGY: One of the following three: Arey, *Developmental Anatomy*; Hamilton, *Human Embryology*; or Patten, *Human Embryology*.

MICROSCOPIC ANATOMY: Bailey, *Textbook of Histology* (13th ed.); mimeographed laboratory manual.

NEUROANATOMY: Strong and Elwyn, *Human Neuroanatomy*; mimeographed laboratory manual.

ORAL HISTOLOGY AND EMBRYOLOGY: Orban, *Oral Histology and Embryology*; Diamond, *Dental Anatomy*.

BIOCHEMISTRY: Harrow and Mazur, *Textbook of Biochemistry* (6th ed.); Karshan, *Laboratory Manual of Biochemistry for Dental Students*.

DENTAL ETHICS, JURISPRUDENCE, and PRACTICE ADMINISTRATION: Mann and Easlick, *Practice Administration for the Dentist*; Carnahan, *The Dentist and the Law*.

DENTAL THERAPEUTICS: Council on Therapeutics, American Dental Association, *Accepted Dental Remedies*; McGehee and Green, *Pharmacology and Pharmacotherapeutics for Dentists*. (Reference: Goodman and Gilman, *Pharmacological Basis of Therapeutics*, 1955.)

DIAGNOSIS: Thoma, *Oral Pathology* (4th ed.); Burket, *Oral Medicine* (2d ed.).

MEDICINE: One of the following three: Cecil and Loeb, *Textbook of Medicine* (9th ed.); Harrison, *Principles of Internal Medicine* (2d ed.); or Comroe, Collins, and Crane, *Internal Medicine in Dental Practice* (4th ed.).

MICROBIOLOGY: Laboratory Manual in Microbiology and Immunology; Burrows, *Textbook of Microbiology* (16th ed.).

OPERATIVE DENTISTRY: Black, *Operative Dentistry*, Vols. I and II (9th ed.); *Operative Dentistry Syllabus*; Grossman, *Root Canal Therapy*.

ORAL PATHOLOGY: Thoma, *Oral Pathology* (3d ed.); or Kronfeld, *Histopathology of the Teeth* (4th ed.).

ORTHODONTICS: Salzmann, *Principles of Orthodontics*.

PATHOLOGY: One of the following four: Boyd, *Textbook of Pathology*; Karsner, *Textbook of Pathology*; Moore, *Textbook of Pathology*; or Anderson, *Pathology*.

PEDODONTICS: McBride, *Juvenile Dentistry* (5th ed.); Brauer *et al.*, *Dentistry for Children* (3d ed.).

PERIODONTOLOGY: Beube, *Periodontology*; and Goldman, *Periodontia*.

PHARMACOLOGY: Goodman and Gilman, *Pharmacological Basis of Therapeutics* (1955).

PHYSIOLOGY: Bard, *Medical Physiology* (10th ed.).

PROSTHETIC DENTISTRY: Skinner, *Science of Dental Materials*; Schlosser and Gehl, *Complete Denture Prosthesis*; Swenson, *Complete Dentures*; Tylman, *Crown and Bridge Prosthesis*; United States Government Printing Office, *Physical Properties of Dental Materials*; Young *et al.*, *Syllabus on Complete Dentures*.

PSYCHIATRY: English and Finch, *Introduction to Psychiatry*; Noyes, *Modern Clinical Psychiatry* (4th ed., 1953); Strecker, *Fundamentals of Psychiatry* (5th ed.).

RADIOLOGY: McCall and Wald, *Clinical Dental Roentgenology* (3d ed.).

SURGERY: Berger, *Principles and Technique of the Removal of Teeth*.

SURGICAL PROSTHESIS: Beder, *Surgical and Maxillofacial Prosthesis*.

POSTGRADUATE TRAINING

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1956-1957 short refresher courses will be offered in various subjects. Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses.

The School of Dental and Oral Surgery is also authorized to grant certificates of training in special branches of dentistry. Study for the certificate of training includes special work in the clinical and basic science branches of dentistry approved by the Dean. At present, an organized sixteen-month course is offered to qualified graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, and periodontology.

For further information see the announcement of Postgraduate Courses for Dentists, which may be obtained from the Dean, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University; anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the announcement of the Faculty of Pure Science, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N. Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Director, School of Public Health and Administrative Medicine, 600 West 168th Street, New York 32, N.Y.

GENERAL REGULATIONS

Each person whose registration has been completed will be considered a student of the University during the session for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is first registered.

The privileges of the University are not available to any student until he has completed his registration. Since, under the University statutes, payment of fees is a part of registration, no student's registration is complete until his fees have been paid. No student is permitted to attend any University course for which he is not officially registered, nor may any student register after the stated period unless he obtains the written consent of the proper dean or director.

Students are held accountable for absences incurred owing to late enrollment. Any student whose religious duties conflict at any time with academic requirements should apply to the proper dean or director for an equitable solution.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems advisable. The disciplinary authority of the University is vested in the President in such cases as he deems proper and, subject to the reserved powers of the President, in the dean of each faculty and the director of the work of each administrative board.

WITHDRAWAL

An honorable discharge will always be granted to any student in good academic standing, and not subject to discipline, who may desire to withdraw from the University; but no student under the age of twenty-one years shall be entitled to a discharge without the assent of his parent or guardian furnished in writing to the proper dean or director. Students withdrawing are required to notify the Registrar in writing at once.

The dean or director may, for reasons of weight, grant a leave of absence to a student in good standing.

GRADUATION

All recipients of degrees awarded during the academic year are expected to attend the Commencement exercises in June unless excused. Diplomas are issued at the times stated in the Academic Calendar; those for the degree of Doctor of Philosophy, however, are issued at any time during the year upon completion of requirements by the candidate.

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work.

REQUIREMENTS FOR PROMOTION

a) A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the class officers of instruction under whom he has studied during the preceding year.

b) The School of Dental and Oral Surgery reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions of study in the school.

Students are classified for readmission or promotion under the following headings:

1. Recommended for advancement.
2. Recommended for readmission to the same class.
3. Recommended neither for advancement nor for readmission to the same class:
 - (*a*) Because of failure.
 - (*b*) Because they fall under paragraph *b* of requirements for promotion.

GRADING OF STUDENTS

The following grade equivalents are used: A, excellent; B, good; C, fair; F, failure.

REQUIREMENTS FOR GRADUATION

In addition to complying with the requirements for admission and to completing the required work of the curriculum, each candidate for the degree of Doctor of Dental Surgery must present satisfactory evidence as required by law of good moral character and of having attained the age of twenty-one years. If the candidate shall have been admitted to advanced standing, he must have spent not less than four academic years or their equivalent in approved medical or dental colleges in the study of the subjects making up the curriculum of the School of Dental and Oral Surgery.

GENERAL INFORMATION

LIBRARY FACILITIES

The Medical Library occupies part of the three lower floors in the College of Physicians and Surgeons. It provides current literature (both books and journals) for faculty and students, and it aids in research through its own collections of current and historical works and through its unique bibliographic service.

The Library contains approximately two hundred thousand volumes of books and journals, some five thousand pamphlets, and about two thousand lantern slides on the history of medicine. More than twenty-three hundred periodicals are received regularly. A professional library staff is available to aid students, faculty, and research workers in the Schools of Medicine, Dentistry, Nursing, Public Health and Administrative Medicine, and the hospitals of the Medical Center.

The libraries on Morningside Heights, containing more than two million volumes, are open to all students of dentistry. The main collection is housed in Butler Library; special and departmental collections are located in various other buildings on the campus. They include collections on biology, chemistry, physics, psychology, sociology, and other subjects related to dentistry and supplement the special collections available in the Medical Library. Books may be borrowed for home use.

Leaflets describing the collections and services of the University Libraries are available in any of the library reading rooms. The Medical Library and all other libraries post their hours of opening.

FINANCIAL AID AND PRIZES

Three Ellis Fellowships are awarded annually to qualified graduates of any of the colleges of recognized rank in the state of Vermont. The holders of these fellowships may pursue resident graduate studies under any one of the graduate schools maintained by the University and are eligible for reappointment for no more than two additional years, with the proviso that a holder of the fellowship who is a student in medicine may be eligible for reappointment for no more than three additional years. The annual stipend is \$1,500. Applications should be submitted on or before February 20 on blanks to be filed with the Office of University Admissions.

The Van Woert Scholarship Fund was established by the alumni of the School of Dental and Oral Surgery in 1940. The award is given annually to a senior student in the dental school who stands high in scholastic attainments, in personal character, and in potentiality of being a credit to Columbia University and the dental profession.

A prize known as the Ella Maria Ewell Medal is awarded annually to the student of the School of Dental and Oral Surgery who, in the judgment of the faculty, is most proficient in some subject of dentistry.

The Alumni Association makes an annual award of the Rowe-Wiberg Medal to the senior student who has shown the greatest proficiency in prosthetic dentistry.

An annual award is made by the Sigma Epsilon Delta Fraternity to the graduating student who, in the opinion of the faculty, shows the greatest promise.

The staff of the Division of Operative Dentistry has established an annual prize for excellence in operative dentistry.

See also "Graduate Courses in the Basic Sciences" on page 17.

Student Loans

Loan funds are provided in a limited amount for the assistance of students, but it is the general policy to grant loans only to students who have satisfactorily completed at least one session of residence at the University. Application is made on a blank which may be obtained from the office of the Dean or of the Bursar. Applications for loans for the winter session should be filed by September 15, for the spring session, by January 15.

Student Employment

Owing to the heavy schedule of the Dental School, it is difficult for dental students to undertake outside part-time work during the academic year and, so far as practical, other financial arrangements should be made.

STUDENT ORGANIZATIONS

Blanks for the registration of student organizations, other than those for which the responsibility is assumed by a faculty or department of instruction, may be obtained at the room assignment desk in the Office of the Registrar, 315 University Hall.

Such student organizations come under the jurisdiction of the Committee on Student Organizations of the University Council and may be granted the privileges of the use of names in which the name of the University is embodied or suggested and the use of University rooms or grounds for meetings and bulletin boards for announcements, only if they have filed their registration blanks, furnishing the committee with lists of officers and other executive members, statements of purposes, copies of constitutions and bylaws, and information concerning the nature of any affiliation or connection with non-University organizations.

Omicron Kappa Upsilon

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity was chartered in the School of Dental and Oral Surgery in 1934. The purpose of this organization is to recognize and honor a maximum of 12 percent of the members of the graduating Senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

The William Jarvie Society

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and to which Sophomores, Juniors, and Seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N.Y. All applications for admission to the examination should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

COURSES FOR DENTAL HYGIENISTS

In September, 1947, the period of training for dental hygienists was increased from one to two academic years. On October 21, 1947, the University Council approved the establishment of the degree of Bachelor of Science to be conferred upon students who, having been admitted on the basis of two years of approved college study covering not less than sixty points (including satisfactory courses in English, biological science or chemistry, and sociology or psychology), complete the course of instruction in the field of dental hygiene, consisting of two academic years of study, prescribed by the Faculty of Medicine.

The Master of Science degree in dental hygiene has been established in administration, supervision, and clinical teaching of dental hygiene to fill the demand for women with graduate education who are qualified to assume teaching and supervisory positions in schools for dental hygienists. It also provides opportunity for administrators, supervisors, and instructors presently employed to complete a graduate degree in dental hygiene.

For further information address the Director, Courses for Dental Hygienists, 630 West 168th Street, New York 32, N.Y.

UNIVERSITY PRIVILEGES

All students enrolled in the Dental School enjoy the privileges and facilities of the University campus, including access to the gymnasium, and other activities.

The gymnasium is situated on Morningside Heights and is open daily, except Sundays and holidays. Students of the School of Dental and Oral Surgery may enjoy its privileges and have the use of the gymnasium, baths, and private lockers. A service charge of \$3.00 per session (winter, spring, or summer), is charged each student using the facilities of the University gymnasium without formal registration in physical education courses. The student receives locker privileges, a towel, complete uniform (except shoes), and laundry service.

STUDENT HEALTH SERVICE

The Student Health Service is located in Room 220, 2d Floor, Vanderbilt Clinic. Daily office hours are held for sick students. Emergency treatment after 5 P.M. and on week ends may be obtained in Admitting Emergency, Vanderbilt Clinic. Students, sick at home and living within the immediate vicinity of the Medical Center, may contact the Physician-in-Charge of the Health Service. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under a hospitalization insurance policy.

RELIGIOUS LIFE

The life of the University community finds religious expression through St. Paul's Chapel and Earl Hall and through the ministry of the Chaplain and those associated with

him in his work. The Chaplain of the University is assisted by three religious counselors: the counselor to Protestant students, the counselor to Roman Catholic students, and the counselor to Jewish students.

Daily services are held in the Chapel, and students are urged to familiarize themselves with the schedules, which are conveniently posted.

There are a number of student religious organizations to which the Chaplain and counselors serve as advisers and with which students are cordially urged to affiliate themselves.

The Chaplain and the counselors are especially eager to establish warm personal relations with students and to meet them in consultation, at the Chapel or in their offices in Earl Hall.

UNIVERSITY RESIDENCE HALLS

Residence halls announcements and application blanks for rooms may be obtained (for men) from the Men's Residence Hall's Office, 125 Livingston Hall, Columbia University, New York 27, N.Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. The advance reservation deposit is payable upon receipt of room assignment. Checks must be made payable to Columbia University.

KING'S CROWN HOTEL

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates, available for relatives and guests of members of the University community.

INTERNATIONAL HOUSE

International House, while not a University residence hall, is primarily a residence for students at Columbia University and other colleges and universities in New York City. It offers comfortable accommodations at reasonable rates. For further information, write to International House, 500 Riverside Drive, New York 27, N.Y.

MEDICAL CENTER BOOKSTORE

The Medical Center Bookstore, located on the second floor of the College of Physicians and Surgeons, is maintained for the convenience of the students and staff of the Medical Center schools and hospitals. The store carries a full stock of textbooks and all other student supplies. Substantial savings are effected whenever the rules of manufacturers and publishers permit. The store is open on weekdays from 8:45 A.M. to 5:30 P.M.; Saturdays, 8:45 A.M. to 1:30 P.M.

OFFICERS OF INSTRUCTION

- HAROLD A. ABRAMSON, *Assistant Clinical Professor of Physiology*; A.B., Columbia, 1920; M.D., 1923
- THOMAS H. ALLEN, *Associate Professor of Physiology*; A.B., Iowa, 1936; Ph.D., 1941
- FRANZ ALTMANN, *Associate Clinical Professor of Otolaryngology*; M.D., Vienna, 1925
- VIRGINIA APGAR, *Professor of Anesthesiology*; A.B., Mt. Holyoke, 1929; M.D., Columbia, 1933
- EDMUND APPELBAUM, *Associate Professor of Dental Anatomy*; D.D.S., New York College of Dentistry, 1922
- HOWARD ARDEN, *Assistant Professor of Dentistry*; B.S., Fordham, 1943; D.D.S., Columbia, 1946
- HERBERT D. AYERS, Jr., *Associate Clinical Professor of Dentistry*; A.B., Columbia, 1929; D.D.S., 1931
- MARGARET W. BARNARD, *Associate Professor of Public Health Practice*; A.B., Smith, 1917; M.D., Cornell, 1923; D.P.H., Johns Hopkins, 1935
- HENRY A. BARTELS, *Assistant Professor of Oral Pathology*; B.S., Rhode Island State, 1917; B.S., Columbia, 1925; D.D.S., 1927
- HERBERT BARTELSTONE, *Assistant Professor of Pharmacology*; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945
- JAMES W. BENFIELD, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1945
- FRANK E. BEUBE, *Clinical Professor of Dentistry*; L.D.S., D.D.S., Toronto, 1930
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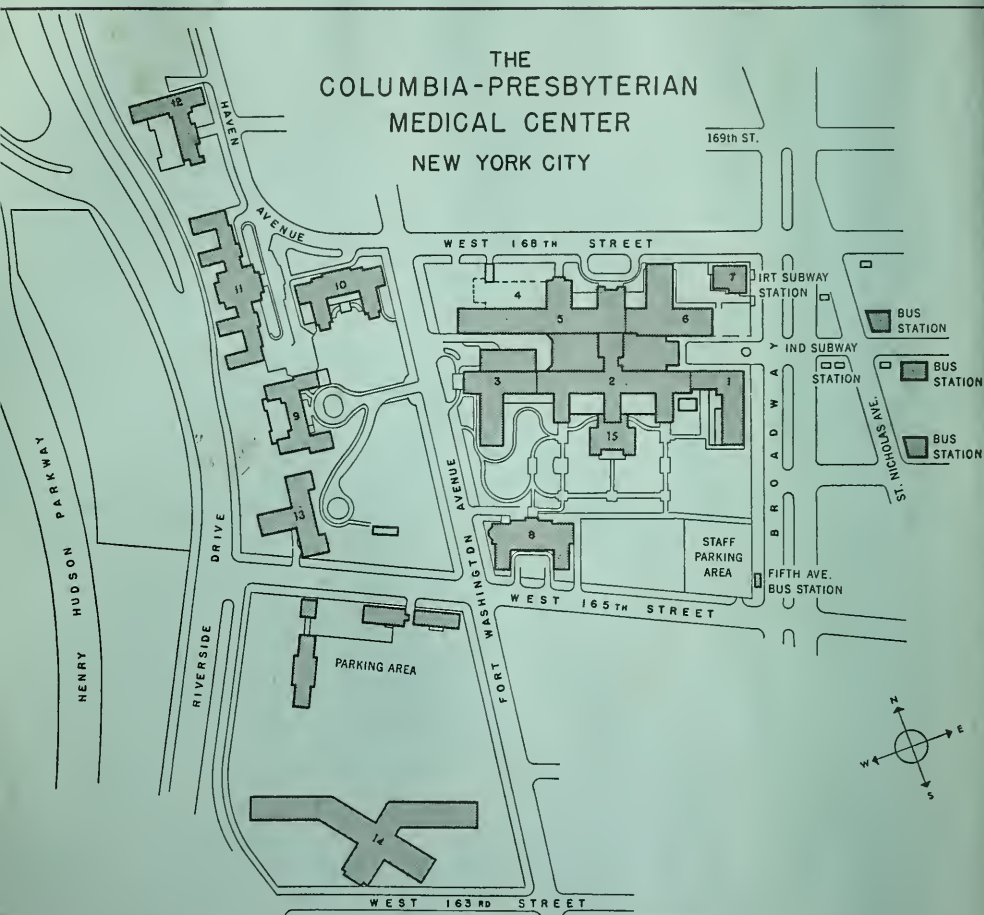
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- September 11 Tuesday, and September 12, Wednesday. Registration, including payment of fees.
- September 17 Monday. Classes begin.
- November 6 Tuesday. Election Day. Holiday.
- November 22 Thursday. Thanksgiving Day. Holiday.
- December 1 Saturday. End of first trimester.
- December 3 Monday. Beginning of second trimester.
- December 24 Monday, through

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- January 6 Sunday. Christmas Holidays.
- February 22 Friday. Washington's Birthday. Holiday.
- March 1 Friday. Last day for filing application or renewal of application for all degrees and certificates, except doctoral degrees, to be conferred in June. The privilege of later application may be granted on payment of a late fee.
- March 2 Saturday. End of second trimester.
- March 4 Monday. Beginning of third trimester.
- April 15 Monday, through April 21, Sunday. Easter Holidays.
- May 25 Saturday. Last day of classes.
- May 27 Monday, through June 3, Monday. Final examinations.
- May 30 Thursday. Memorial Day. Holiday.
- June 4 Tuesday. Conferring of degrees.

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COLUMBIA UNIVERSITY BULLETIN OF INFORMATION • SERIES 57 • NO. 12 • MARCH 23, 1957 • 5,200 COPIES

Issued at Columbia University, Morningside Heights, New York 27, N.Y., weekly from January for forty-six consecutive issues. Reentered as second-class matter August 15, 1952, at the Post Office at New York, N.Y., under the Act of August 24, 1912. Acceptance for mailing at a special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized.

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AT THE SCHOOL OF DENTAL AND ORAL SURGERY

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THOMAS P. FLEMING, M.S. *Librarian*

THE SCHOOL OF DENTAL AND ORAL SURGERY

Columbia University was founded in 1754 as King's College by royal grant of George II, King of England, "for the Instruction of Youth in the Learned Languages, and the Liberal Arts and Sciences." The Revolutionary War interrupted its active work, but in 1784 it was reopened as Columbia College. In 1912 the title was changed to Columbia University in the City of New York.

In May, 1916, the University issued a pamphlet entitled *A Dental School on University Lines*. In this pamphlet the University stated its intent to establish a school of dentistry in affiliation and coordination with the School of Medicine. The pamphlet's introductory statement outlined the University's policy for dental education which has been consistently followed: "Dentistry and Dental Education are on the threshold of extraordinary development but are unable to take advantage of their opportunities because of the traditional separation of dentistry and medicine. Dentistry has been shown by recent investigation and research to be logically a branch of general medicine."

In September, 1916, students in dentistry were admitted to courses in Columbia University at the School of Medicine. On March 5, 1917, the Trustees of the University established a school of dentistry as of September 27, 1916, and the School of Dentistry became an integral part of the University. On July 1, 1923, the College of Dental and Oral Surgery of New York (organized in 1892) was merged with the School of Dentistry, and the combined institutions named the School of Dental and Oral Surgery of Columbia University.

In September, 1928, the school was moved to the Columbia University-Presbyterian Hospital Medical Center, where the dental department of the School occupies three floors. The fundamental science subjects, which are given to both dental and medical students, are taught in the adjoining College of Physicians and Surgeons, the corridors of the two schools being continuous. In adjacent wings, the halls of which are also continuous with those of the school, the wards and outpatient departments of the Presbyterian and associated hospitals are located, thus giving the closest possible contact and association with all branches of health service. The Dental School clinic includes as one of its functions the dental care of the patients of the Medical Center hospitals.

In order to strengthen the instruction of dental and medical students and to fulfill a further step in the integration of dental education and research with the medical program at the Columbia-Presbyterian Medical Center which was visualized when the Dental School was made a part of the Center in 1928, the faculties of the two schools were merged July 1, 1945. This faculty is responsible for the educational programs in medicine, dentistry, public health, and nursing. A committee on dental education, established by University statute, of which a majority is from the Department of Dental and Oral Surgery and of which the Associate Dean for Dental and Oral Surgery is the chairman, initiates recommendations to the faculty on the qualifications and admission requirements for dental students, the curriculum of instruction, the candidates for the degree of Doctor of Dental Surgery, and other educational matters dealing with dentistry.

The course in dentistry covers four academic years and leads to the degree of Doctor of Dental Surgery. The greater part of the first two years of the curriculum is taken in the fundamental science departments of instruction in the University, which are integral parts of the College of Physicians and Surgeons and the School.

ADMISSION, REGISTRATION, AND FEES

Application. It is desirable that candidates make application during the academic year preceding that for which they seek admission. It is not necessary to complete the academic requirements before making application. However, all requirements must be completed before matriculation. Application blanks will be furnished by the Office of the Committee on Admissions of the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application should be accompanied by a check or money order for \$5.00, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable.

The minimum requirement for admission to the first-year class is the satisfactory completion of three full years at an acceptable college of arts and sciences, which must include the satisfactory completion of the following courses required by the New York State Board of Regents:

	<i>Semester Hours</i>
English composition and literature	6
Physics	6
Biology	6
Chemistry (inorganic)	6
Chemistry (an approved course in organic chemistry)	6

A point or semester hour is the equivalent of one hour of lecture or recitation plus two hours of outside work or three hours of laboratory work per week, per semester. Suitable laboratory work must be included in each of the courses in science.

Inasmuch as an understanding of the biological sciences is based upon the knowledge of the underlying sciences of chemistry, physics, and biology, students are urged, so far as time permits, to take additional courses in quantitative, qualitative, physical, and organic chemistry, physics, comparative anatomy, and other advanced courses in biology, as well as courses in mathematics, German and French, sociology, history, and other subjects of general cultural and scientific value. Courses in fine and industrial arts are also useful.

Owing to the limited number of students who can be accommodated, completion of the requirements for entrance does not guarantee admission. The entire college record of each student is carefully examined by the Committee on Admissions in order that those who are judged most capable of meeting the exacting demands of the course and of the profession of dentistry may be selected. Preference will be given in the selection of students to those who present to the Committee on Admissions evidence of high achievement in selected college courses of special predental value and who, in the opinion of the Committee on Admissions, are most likely to succeed in dentistry, rather than to those who present the largest number of course credits or those who have limited their preparation to the prescribed subjects. Acceptance of a student for admission is based on grounds of character and health as well as on the fulfillment of academic requirements.

An acceptance fee of \$50 is payable within two weeks after notification of acceptance (see page 6).

All applicants will be required to take the Dental Aptitude Tests conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

COMBINED COURSES

Combined courses with Barnard College. Under the plan of "professional option" students from Barnard College may receive the Bachelor of Arts degree from Barnard College after the completion of three years of undergraduate work and the first year in the School of Dental and Oral Surgery. To be eligible for this privilege, before entering the dental school, the student must have completed at Barnard 90 points of academic work which includes all specific requirements, a major of 28 points, and the major examination or major thesis.

Combined courses with the School of General Studies. Students from the School of General Studies may exercise the professional option after the completion of ninety-four points, including all the courses prescribed for the Bachelor of Science degree, not less than sixty-four of which have been received for work in Columbia University.

Combined courses in dentistry and medicine. It is usually possible for a graduate of a registered medical school with the degree of Doctor of Medicine to meet the requirements of the school and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one summer session.

ADMISSION OF FOREIGN STUDENTS

The State Department of Education has special requirements with which students who are not citizens of this country must comply. Any foreign student desiring to apply to the School of Dental and Oral Surgery should communicate with the Dean.

REGISTRATION

Before attending University courses, every student must present himself at the Office of the Registrar, file a registration blank giving such information as may be required and pay his fees. The periods set aside for registration in each session are stated in the Academic Calendar. Registration at a later date is permitted only with the written permission of the Dean, satisfactory cause for the delay having been shown.

FEES

Tuition fees, the University fee, the student health service fee, and laboratory deposits are payable each session in advance and as part of registration. If these fees are paid after the last day of registration (see the Academic Calendar), they will not be reduced, and a late fee of \$3.00 will be imposed.

The following annual fees for the full program for a candidate for the D.D.S. degree are prescribed by statute and are subject to change at any time at the discretion of the Trustees. The fees to be paid by students who are not enrolled for the full program will be assessed by the Registrar as provided by the University statutes.

University fee	\$ 48.00
Tuition fee	900.00
Student health service fee	

This fee will be used to pay the annual premium of the Associated Hospital Service of New York for hospital insurance (unless the student is already covered by hospital insurance) and to pay part of the cost of the student health service

25.00

6 • FEES • EQUIPMENT

Instrument case rental (for sophomores, juniors, and seniors) \$ 5.00

Application fees

For processing application for admission	5.00
For each deficiency or special examination	10.00
For renewal of application for a degree (see below)	1.00

Late fees

For late registration	3.00
For late application for a deficiency or special examination	5.00
For late application, or renewal of application, for a degree	5.00

Rebates

The University fee, the student health service fee, application fees, and late fees are not subject to rebate. If a student withdraws from the University, a partial return of tuition fees may be authorized by the Registrar. When a rebate is allowed, it will be reckoned from the day on which the Registrar receives written notice from the student.

Undue breakage

While no deposit is required of students to cover laboratory material and ordinary breakage, any unusual amount of breakage will be charged.

Renewal of application for a degree. An application for a degree, other than the several doctoral degrees, terminates at the next regular time for the issuance of diplomas subsequent to the date of filing, but it may be renewed for a fee of \$1.00 each time that a candidate chooses to come up for consideration.

Acceptance fee. Within one week after an applicant has been notified that his application has been accepted, he must notify the Dean that he intends to matriculate and accompany his communication with a check or money order for \$50, payable to Columbia University. This acceptance fee will belong to the University and if the applicant does not register at the school for the specific session, it will not be returned. If he registers at the school at the next enrollment of entering students, the amount of the acceptance fee will be deducted from his tuition fees for that session.

Fees for repeated courses. Students obliged to repeat the work for any year are required to pay the full tuition fee.

DENTAL EQUIPMENT

Instruments and supplies. Each student is required to supply himself with instruments as specified in the official instrument list. The purchase from the University of instruments in original package outfits has been made compulsory, and unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. The students will not be allowed to purchase more than is required to complete a case. The quantity and quality are selected with a view to the best possible results and conservation of the student's best interests.

Microscopes. All students entering the School of Dental and Oral Surgery are required to provide themselves with microscopes of a satisfactory type. A microscope of standard make fitted with the following attachments will fill the requirements:

- a. Triple nosepiece.
- b. Abbe or variable focus condenser.
- c. 10x and 6x oculars.
- d. 16 mm. and 4 mm. objectives.
- e. Oil immersion lens.

Lockers. Each student will be assigned a locker on entering and will be required to use a combination lock as prescribed by the school.

ESTIMATED EXPENSES

An itemized estimate of the average expenses of a full-time student for an academic year in the School of Dental and Oral Surgery exclusive of travel, clothing, amusements, charity, organizations, and sundries is given below. These items are, of course, variable but should not be overlooked in estimating the total expense. The tuition, room, board, books, and laundry figures are based upon rates which prevailed during 1956-1957 and can be accepted as applicable in general for the year 1957-1958 unless national economic changes require their alteration.

	<i>Average</i>	<i>Minimum</i>
Tuition fee	\$ 900	\$ 900
Miscellaneous fees	78	78
Room	330	225
Board	600	500
Books	150	115
Instruments (see below)		
Laundry	75	35
	<u>\$2,133</u>	<u>\$1,853</u>

In the freshman year, instruments will cost about \$800; in the sophomore year, about \$1,100; in the junior year, about \$300; in the senior year, about \$90. Estimates are subject to correction as the basic prices of supplies and instruments change. Instruments are to be paid for at the opening of the academic year. The cost of books will vary, depending upon the choice made from the selection offered.

PLAN OF INSTRUCTION

The curriculum is arranged with the object of providing the student with the necessary opportunities for acquiring a knowledge of the fundamental sciences in relation to dentistry and the techniques of approach in dental problems. Beginning in the first two academic years with a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology, the student prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skills required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of the dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by means of the division of classes into small sections, conferences, and the comprehensive case method of instruction.

<i>Subjects*</i>	<i>Class Hours</i>	<i>Lab. or Clin. Hours</i>	<i>Total Hours</i>
FIRST YEAR			
Anatomy			
Embryology 152F	22		22
Gross 151FS	50	220	270
Microscopic 150FS	42	126	168
Neuro 153S	20	28	48
Oral 101FS	20	90	110
Oral Microscopic 115S	24	48	72
Biochemistry 150FS	36	108	144
Crown and Bridge 104T	11	66	77
Dental Materials 125T	11	22	33
Operative Dentistry 130T	11	66	77
Prosthetic Dentistry 156T	11	99	110
Theory and Practice			
Dental History 287T	11		11
<i>Total</i>			<i>1,142</i>
SECOND YEAR			
Crown and Bridge 105FST	11	132	143
Dental Materials 126F	11	22	33
Microbiology 151F and 152F	33	99	132
Operative Dentistry 131FST	22	132	154
Pathology 150ST	54	144	198
Periodontology 151T	11	55	66
Pharmacology 150ST	55	33	88
Physiology 150FS	56	153	209

* Letter following course number designates trimester; F=first; S=second; and T=third.

<i>Subjects*</i>	<i>Class Hours</i>	<i>Lab. or Clin. Hours</i>	<i>Total Hours</i>
Prosthetic Dentistry 157FST	11	132	143
Psychiatry 150S	11		11
Surgery, Principles 168S	11		11
Surgery, Oral 270AT	11		11
<i>Total</i>			1,199
THIRD YEAR			
Anatomy, Maxillofacial 252S	11		11
Crown and Bridge Technic 205F		85	85
Clinic 206ST	11	110	121
Applied Occlusal Dynamics 212T	30		30
Diagnosis 212FST	33	25	58
Operative Dentistry 233FST	20	245	265
Orthodontics 241S	22	60	82
Pathology, Oral 246F	22	60	82
Periodontology 251S	11	30	41
Practice of Medicine 278T	22	30	52
Prosthetic Dentistry 260FT and 261FST	22	165	187
Radiology 267F	11	15	26
Surgery, Oral 270BF	11	20	31
Theory and Practice Therapeutics 286T	11		11
<i>Total</i>			1,082
FOURTH YEAR			
Crown and Bridge 210S and 211FST	11	130	141
Diagnosis 213F		25	25
Diagnosis Seminar 214S		30	30
Diagnosis 215T	11		11
Orthodontics 242FST		30	30
Operative Dentistry 234FST	22	313	335
Pedodontics 202FST	22	82	104
Periodontology 252FS and 253F	22	30	52
Prosthetic Dentistry 263FST and 264T	11	130	141
Public Health 222ST	22		22
Surgery, Oral 272FST	44	90	134
Surgery, Seminar 274T	11		11
Surgical Prosthesis 265S	11	19	30
Theory and Practice Clinical Oral Physiology 283F	11		11
Ethics, Jurisprudence and Practice Administration 281ST	33		33
Comprehensive 285T			
<i>Total</i>			1,110

* Letter following course number designates trimester; F=first; S=second; and T=third.

COURSES OF INSTRUCTION

For purposes of instruction the work of each academic year is scheduled in three sessions of eleven weeks each, which are designated as First, Second, and Third Trimesters.

For a detailed statement of the content of each course, the student is referred to the departmental statements which follow.

The outline on pages 8 and 9 shows the work required of a candidate for the degree of Doctor of Dental Surgery. The University reserves the right to make such changes in the program of studies at any time as experience may prove desirable.

ANATOMY

Anatomy 101—Oral anatomy. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Anatomy 115—Oral microscopic anatomy and embryology. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150—Microscopic anatomy. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as *Anatomy 101F* in the Medical School.

Anatomy 151—Gross anatomy. Freshman year.

Lectures, conferences, and laboratory.

Anatomy 152—Embryology. Freshman year.

Lectures and demonstrations dealing with the dynamics of vertebrate development, with particular reference to mammals and man.

Anatomy 153—Neuroanatomy. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to *Anatomy 106S* in the Medical School.

Anatomy 252—Maxillofacial anatomy. Junior year.

Lectures and demonstrations. A review course with special application to the problems of the major fields of dentistry.

BIOCHEMISTRY

Biochemistry 150—Introductory biochemistry. Freshman year.

Lectures and laboratory. A study of the chemistry of life processes with special reference to the animal organism.

DENTAL MATERIALS

Dental Materials 126—Physical properties of dental materials. Freshman and Sophomore year.

Lectures and laboratory on the physical and chemical properties of the metals and other materials used in dentistry, with clinical applications.

DIAGNOSIS

Diagnosis 212—Dental diagnosis lectures and clinic. Junior year.

Lectures and clinical practice in diagnostic procedures, comprehensive diagnosis, pulp symptomatology, radiographic interpretation, and diagnosis of lesions and diseases of the oral cavity.

Diagnosis 213—Dental diagnosis clinic. Senior year.

Continuation of clinic of *Diagnosis 212*.

Diagnosis 214—Diagnosis seminar. Senior year.

Discussion and differential diagnosis of diseases of the oral cavity.

Diagnosis 215—Diagnosis seminar. Senior year.

Continuation of *Diagnosis 214*.

MEDICINE

Medicine 278—General survey of medicine. Junior year.

Lectures and conferences covering fundamentals of general medicine; also clinics in which patients are studied for conspicuous manifestations of systemic conditions and their significance.

MICROBIOLOGY

Microbiology 151—General medical microbiology and immunology. Sophomore year.

Lectures, conferences, and laboratory.

Microbiology 152—Principles of microbiology, immunology, and epidemiology. Sophomore year.

This course is identical with *Microbiology 105F* in the Medical School except that lectures on the mouth bacteria are substituted for several of those of the medical series.

OPERATIVE DENTISTRY

Operative Dentistry 130—Elements of operative dentistry. Freshman year.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 131—Elements of operative dentistry. Sophomore year.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233—Operative clinical practice. Junior year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234—Advanced clinical practice. Senior year.

A continuation in lectures and clinic of *Operative Dentistry 233* with the consideration of special problems in operative practice, including endodontia.

ORTHODONTICS

Orthodontics 241—Principles of orthodontics. Junior year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion in orthodontics by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and constructing of removable appliances used as space maintainers and habit breakers and to correcting tooth alignment in preparation for restorative dentistry and treatment of periodontal conditions. Clinical practice in the use of appliances constructed in the laboratory.

12 • COURSES OF INSTRUCTION

Orthodontics 242—Orthodontic clinic. Senior year.

Clinical orthodontics.

PATHOLOGY

Pathology 150—General and special pathology. Sophomore year.

A study of important pathological conditions, demonstrated by museum specimens and a very complete series of histological preparations.

Pathology 246—Oral pathology. Junior year.

Lectures, conferences, and laboratory work on the diseases of the jaws, mouth, and teeth.

Pathology 247—Oral pathology seminar. Senior year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS

Pedodontics 202—Pedodontics lectures and clinic. Senior year.

Lectures, conferences, and clinical practice relating to operative dental procedures for children, management of child dental patients, and application of present knowledge of dental development and preventive dentistry.

PERIODONTOLOGY

Periodontology 151—Periodontia clinic. Sophomore year.

Lectures and clinics on dental prophylactic technique and early disturbances of the periodontium.

Periodontology 251—Periodontia clinic. Junior year.

Lectures and clinics in the diagnosis and treatment of periodontal diseases.

Periodontology 252—Periodontology lectures. Senior year.

Lectures and conferences on the theory and practice of periodontology and periodontal histopathology.

Periodontology 253—Periodontia clinic. Senior year.

Work in clinics in the diagnosis and treatment of advanced periodontal diseases.

PHARMACOLOGY

Pharmacology 150—Pharmacology. Sophomore year.

Lectures, conferences, and laboratory. In this course the pharmacological action of drugs on man and lower animals is studied. Principles are emphasized so as to furnish a rational basis for therapy by drugs.

PHYSIOLOGY

Physiology 150—Mammalian physiology. Sophomore year.

Lectures, conferences, and laboratory.

PROSTHETIC DENTISTRY

Prosthetics 104 and 105—Crown and bridge lectures and technique. Freshman and Sophomore year respectively.

Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.

Prosthetics 156 and 157—Prosthetic lectures and technique. Freshman and Sophomore year respectively.

Lectures and technical procedures in full and partial denture construction.

Prosthetics 205—Crown and bridge lectures and technique. Junior year.

Lectures on the clinical procedures in crown and bridgework.

Prosthetics 206—Crown and bridge clinic. Junior year.

Clinical construction of elementary crown and bridgework.

Prosthetics 210—Crown and bridge lectures. Senior year.

Lectures and conferences on various types of bridgework.

Prosthetics 211—Crown and bridge clinic. Senior year.

Clinical construction of crown and bridgework.

Prosthetics 212—Applied occlusal dynamics. Junior year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260—Prosthetic lectures. Junior year.

Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.

Prosthetics 261—Prosthetic clinic. Junior year.

Clinical construction of full and partial dentures.

Prosthetics 263—Prosthetic clinic. Senior year.

Clinical construction of full and partial dentures.

Prosthetics 264—Prosthetic lectures. Senior year.

A series of lectures on clinical considerations in partial denture diagnosis, design, and construction.

Prosthetics 265—Surgical prosthesis. Senior year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

PSYCHIATRY

Psychiatry 10—Psychiatry for the dentist. Sophomore year.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH

Public Health 222—Principles of public health. Senior year.

Survey course in the theory and practice of preventive medicine, dentistry, and public health. Fundamental principles of administration, statistics, epidemiology, industrial hygiene, and sanitation. The principles and problems of dental health practice are emphasized.

RADIOLOGY

Radiology 267—Oral radiology practice. Junior year.

Lectures, readings, and discussions on topics relative to oral radiology. Practice in exposing, processing, and mounting dental radiographs.

SURGERY

Surgery 168—Principles of surgery. Sophomore year.

Lectures, seminars, and basic principles of general surgery.

Surgery 270A—Oral surgery. Sophomore year.

Lectures and seminars on local anesthesia and removal of teeth.

Surgery 270B—Oral surgery. Junior year.

Demonstrations, lectures, and clinical practice in local anesthesia and the removal of teeth.

Surgery 272—Oral surgery. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia.

Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274—Oral surgery seminar. Senior year. Required.

Lectures and seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation.

THEORY AND PRACTICE OF DENTISTRY

Theory and practice 281—Dental ethics, jurisprudence, and practice administration. Senior year.

Lecture and conference course on dental ethics, jurisprudence, economics, office conduct, and practice management.

Theory and Practice 283—Clinical oral physiology. Senior year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and clinical conferences.

Theory and Practice 285—Comprehensive case. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of X-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 286—Therapeutics. Junior year.

Lectures and conferences on drugs and their clinical application.

Theory and Practice 287—Dental history. Freshman year.

Lectures and conferences on the development of the scientific and technical principles of modern dentistry.

TEXTBOOKS

The following list includes most of the books normally used. As a rule, only the latest editions of the textbooks should be purchased. Students are warned against buying any books until specifically advised by the departments concerned.

ANATOMY. GROSS ANATOMY: One of the following three: Gray's *Anatomy*; Cunningham, *Textbook of Anatomy*; or Morris, *Human Anatomy*. One of the following three dictionaries: Stedman, Gould, or Dorland's American; Cunningham, *Manual of Practical Anatomy*, Vols. II and III. One of the following four: Grant, *Atlas of Anatomy*; Truex and Kellner, *Detailed Atlas of the Head and Neck*; Spalteholz, *Hand Atlas of Human Anatomy*; or Anson, *Atlas of Human Anatomy*.

MAXILLOFACIAL ANATOMY: Shapiro, *Applied Anatomy of the Head and Neck* (1954 ed.).

EMBRYOLOGY: One of the following three: Arey, *Developmental Anatomy*; Hamilton, *Human Embryology*; or Patten, *Human Embryology*.

MICROSCOPIC ANATOMY: Bailey, *Textbook of Histology* (13th ed.); mimeographed laboratory manual.

NEUROANATOMY: Strong and Elwyn, *Human Neuroanatomy*; mimeographed laboratory manual.

ORAL HISTOLOGY AND EMBRYOLOGY: Orban, *Oral Histology and Embryology*; Diamond, *Dental Anatomy*.

BIOCHEMISTRY: Harrow and Mazur, *Textbook of Biochemistry* (6th ed.); Karshan, *Laboratory Manual of Biochemistry for Dental Students*.

DENTAL ETHICS, JURISPRUDENCE, and PRACTICE ADMINISTRATION: Mann and Easlick, *Practice Administration for the Dentist*; Carnahan, *The Dentist and the Law*.

DENTAL HISTORY: Brenner, *Story of Dentistry* (3rd ed.).

DENTAL THERAPEUTICS: Council on Therapeutics, American Dental Association, *Accepted Dental Remedies*; McGehee and Green, *Pharmacology and Pharmacotherapeutics for Dentists*. (Reference: Goodman and Gilman, *Pharmacological Basis of Therapeutics*, 1955.)

DIAGNOSIS: Thoma, *Oral Pathology* (4th ed.); Burket, *Oral Medicine* (2d ed.).

MEDICINE: One of the following two: Cecil and Loeb, *Textbook of Medicine* (9th ed.); Harrison, *Principles of Internal Medicine* (2d ed.).

MICROBIOLOGY: Laboratory Manual in Microbiology and Immunology; Dubos, *Bacterial and Mycotic Infections of Man* (2d ed.); Rivers, *Viral and Rickettsial Diseases of Man* (2d ed.).

OPERATIVE DENTISTRY: Black, *Operative Dentistry*, Vols. I and II (9th ed.); *Operative Dentistry Syllabus*; Grossman, *Root Canal Therapy*.

ORAL PATHOLOGY: Thoma, *Oral Pathology* (3d ed.); or Kronfeld, *Histopathology of the Teeth* (4th ed.).

ORTHODONTICS: Salzmann, *Principles of Orthodontics*.

PATHOLOGY: One of the following four: Boyd, *Textbook of Pathology*; Karsner, *Textbook of Pathology*; Moore, *Textbook of Pathology*; or Anderson, *Pathology*.

PEDODONTICS: McBride, *Juvenile Dentistry* (5th ed.); Brauer *et al.*, *Dentistry for Children* (3d ed.).

PERIODONTOLOGY: Beube, *Periodontology*; and Goldman, *Periodontia*.

PHARMACOLOGY: Goodman and Gilman, *Pharmacological Basis of Therapeutics* (1955).

PHYSIOLOGY: Bard, *Medical Physiology* (10th ed.).

PROSTHETIC DENTISTRY: Skinner, *Science of Dental Materials*; Schlosser and Gehl, *Complete Denture Prosthesis*; Swenson, *Complete Dentures*; Tylman, *Crown and Bridge Prosthesis*; United States Government Printing Office, *Physical Properties of Dental Materials*; Young *et al.*, *Syllabus on Complete Dentures*.

PSYCHIATRY: English and Finch, *Introduction to Psychiatry*; Noyes, *Modern Clinical Psychiatry* (4th ed., 1953); Strecker, *Fundamentals of Psychiatry* (5th ed.).

RADIOLOGY: McCall and Wald, *Clinical Dental Roentgenology* (3d ed.).

SURGERY: Berger, *Principles and Technique of the Removal of Teeth*.

SURGICAL PROSTHESIS: Beder, *Surgical and Maxillofacial Prosthesis*.

POSTGRADUATE TRAINING

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1957-1958 short refresher courses will be offered in various subjects. Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses.

The School of Dental and Oral Surgery is also authorized to grant certificates of training in special branches of dentistry. Study for the certificate of training includes special work in the clinical and basic science branches of dentistry approved by the Dean. At present, an organized sixteen-month course is offered to qualified graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, and periodontology.

For further information see the bulletin of Postgraduate Courses for Dentists, which may be obtained from the Dean, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University; anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the bulletin of the Graduate Faculties, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N. Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Executive Officer, School of Public Health and Administrative Medicine, 600 West 168th Street, New York 32, N. Y.

GENERAL REGULATIONS

Each person whose registration has been completed will be considered a student of the University during the session for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is first registered.

The privileges of the University are not available to any student until he has completed his registration. Since, under the University statutes, payment of fees is a part of registration, no student's registration is complete until his fees have been paid. No student is permitted to attend any University course for which he is not officially registered, nor may any student register after the stated period unless he obtains the written consent of the proper dean or director.

Students are held accountable for absences incurred owing to late enrollment. Any student whose religious duties conflict at any time with academic requirements should apply to the proper dean or director for an equitable solution.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems advisable. The disciplinary authority of the University is vested in the President in such cases as he deems proper and, subject to the reserved powers of the President, in the dean of each faculty and the director of the work of each administrative board.

WITHDRAWAL

An honorable discharge will always be granted to any student in good academic standing, and not subject to discipline, who may desire to withdraw from the University; but no student under the age of twenty-one years shall be entitled to a discharge without the assent of his parent or guardian furnished in writing to the proper dean or director. Students withdrawing are required to notify the Registrar in writing at once.

The dean or director may, for reasons of weight, grant a leave of absence to a student in good standing.

GRADUATION

All recipients of degrees awarded during the academic year are expected to attend the Commencement exercises in June unless excused. Diplomas are issued at the times stated in the Academic Calendar; those for the degree of Doctor of Philosophy, however, are issued at any time during the year upon completion of requirements by the candidate.

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work.

REQUIREMENTS FOR PROMOTION

a) A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the class officers of instruction under whom he has studied during the preceding year.

b) The School of Dental and Oral Surgery reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions of study in the school.

Students are classified for readmission or promotion under the following headings:

1. Recommended for advancement.
2. Recommended for readmission to the same class.
3. Recommended neither for advancement nor for readmission to the same class:
 - (*a*) Because of failure.
 - (*b*) Because they fall under paragraph *b* of requirements for promotion.

GRADING OF STUDENTS

The following grade equivalents are used: A, excellent; B, good; C, fair; F, failure.

REQUIREMENTS FOR GRADUATION

In addition to complying with the requirements for admission and to completing the required work of the curriculum, each candidate for the degree of Doctor of Dental Surgery must present satisfactory evidence as required by law of good moral character and of having attained the age of twenty-one years. If the candidate shall have been admitted to advanced standing, he must have spent not less than four academic years or their equivalent in approved medical or dental colleges in the study of the subjects making up the curriculum of the School of Dental and Oral Surgery.

GENERAL INFORMATION

LIBRARY RESOURCES

The Medical Library occupies part of the three lower floors in the College of Physicians and Surgeons. It provides current literature (both books and journals) for faculty and students, and it aids in research through its own collections of current and historical works and through its unique bibliographic service.

The Library contains approximately two hundred and ten thousand volumes of books and journals, some five thousand pamphlets, and about two thousand lantern slides on the history of medicine. More than twenty-four hundred periodicals are received regularly. A professional library staff is available to aid students, faculty, and research workers in the Schools of Medicine, Dentistry, Nursing, Public Health and Administrative Medicine, and the hospitals of the Medical Center.

The libraries on Morningside Heights, containing more than two million volumes, are open to all students of dentistry. The main collection is housed in Butler Library; special and departmental collections are located in various other buildings on the campus. They include collections on biology, chemistry, physics, psychology, sociology, and other subjects related to dentistry and supplement the special collections available in the Medical Library. Books may be borrowed for home use.

Leaflets describing the collections and services of the University Libraries are available in any of the library reading rooms. The Medical Library and all other libraries post their hours of opening.

FINANCIAL AID AND PRIZES

Three Ellis Fellowships are awarded annually to qualified graduates of any of the colleges of recognized rank in the state of Vermont. The holders of these fellowships may pursue resident graduate studies under any one of the graduate schools maintained by the University and are eligible for reappointment for no more than two additional years, with the proviso that a holder of the fellowship who is a student in medicine may be eligible for reappointment for no more than three additional years. The annual stipend is \$1,500. Applications should be submitted on or before February 20 on blanks to be filed with the Office of University Admissions.

The Van Woert Scholarship Fund was established by the alumni of the School of Dental and Oral Surgery in 1940. The award is given annually to a senior student in the dental school who stands high in scholastic attainments, in personal character, and in potentiality of being a credit to Columbia University and the dental profession.

A prize known as the Ella Maria Ewell Medal is awarded annually to the student of the School of Dental and Oral Surgery who, in the judgment of the faculty, is most proficient in some subject of dentistry.

The Alumni Association makes an annual award of the Rowe-Wiberg Medal to the senior student who has shown the greatest proficiency in prosthetic dentistry.

An annual award is made by the Sigma Epsilon Delta Fraternity to the graduating student who, in the opinion of the faculty, shows the greatest promise.

The staff of the Division of Operative Dentistry has established an annual prize for excellence in operative dentistry.

See also "Graduate Courses in the Basic Sciences" on page 17.

Student Loans

Loan funds are provided in a limited amount for the assistance of students, but it is the general policy to grant loans only to students who have satisfactorily completed at least one session of residence at the University. Application is made on a blank which may be obtained from the office of the Dean or of the Bursar. Applications for loans for the winter session should be filed by September 15, for the spring session, by January 15.

Student Employment

Owing to the heavy schedule of the Dental School, it is difficult for dental students to undertake outside part-time work during the academic year and, so far as practical, other financial arrangements should be made.

STUDENT ORGANIZATIONS

Blanks for the registration of student organizations, other than those for which the responsibility is assumed by a faculty or department of instruction, may be obtained at the room assignment desk in the Office of the Registrar, 315 University Hall.

Such student organizations come under the jurisdiction of the Committee on Student Organizations of the University Council and may be granted the privileges of the use of names in which the name of the University is embodied or suggested and the use of University rooms or grounds for meetings and bulletin boards for announcements, only if they have filed their registration blanks, furnishing the committee with lists of officers and other executive members, statements of purposes, copies of constitutions and bylaws, and information concerning the nature of any affiliation or connection with non-University organizations.

Omicron Kappa Upsilon

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity was chartered in the School of Dental and Oral Surgery in 1934. The purpose of this organization is to recognize and honor a maximum of 12 percent of the members of the graduating Senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

The William Jarvie Society

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and to which Sophomores, Juniors, and Seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23

South Pearl St., Albany 7, N. Y. All applications for admission to the examination should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

COURSES FOR DENTAL HYGIENISTS

On October 21, 1947, the University Council approved the establishment of the degree of Bachelor of Science to be conferred upon students who, having been admitted on the basis of two years of approved college study covering not less than sixty points, complete the course of instruction in the field of dental hygiene.

The course prepares graduates for all types of dental health positions including permanent dental hygiene teachers license in New York State and the educational requirements for dental hygienists in public health as stated in the May 1, 1956 report, Committee on Education, American Public Health Association.

The Master of Science degree in dental hygiene has been established in administration, supervision, and clinical teaching of dental hygiene to fill the demand for women with graduate education who are qualified to assume teaching and supervisory positions in schools for dental hygienists. It also provides opportunity for administrators, supervisors, and instructors presently employed to complete a graduate degree in dental hygiene.

For further information address the Director, Courses for Dental Hygienists, 630 West 168th Street, New York 32, N. Y.

UNIVERSITY PRIVILEGES

All students enrolled in the Dental School enjoy the privileges and facilities of the University campus, including access to the gymnasium, and other activities.

The gymnasium is situated on Morningside Heights and is open daily, except Sundays and holidays. Students of the School of Dental and Oral Surgery may enjoy its privileges and have the use of the gymnasium, baths, and private lockers. A service charge of \$3.00 per session (winter, spring, or summer), is charged each student using the facilities of the University gymnasium without formal registration in physical education courses. The student receives locker privileges, a towel, complete uniform (except shoes), and laundry service.

STUDENT HEALTH SERVICE

The Student Health Service is located in Room 2-220, Vanderbilt Clinic. Daily office hours are held for sick students. Emergency treatment after 5 P.M. and on week ends may be obtained in Admitting Emergency, Vanderbilt Clinic. Students, sick at home and living within the immediate vicinity of the Medical Center, may contact the Physician-in-Charge of the Health Service. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under a hospitalization insurance policy.

RELIGIOUS LIFE

The life of the University community finds religious expression through St. Paul's Chapel and Earl Hall and through the ministry of the Chaplain and those associated with him in his work. The Chaplain of the University is assisted by three religious counselors: the counselor to Protestant students, the counselor to Roman Catholic students, and the counselor to Jewish students.

Daily services are held in the Chapel, and students are urged to familiarize themselves with the schedules, which are conveniently posted.

There are a number of student religious organizations to which the Chaplain and counselors serve as advisers and with which students are cordially urged to affiliate themselves.

The Chaplain and the counselors are especially eager to establish warm personal relations with students and to meet them in consultation, at the Chapel or in their offices in Earl Hall.

HOUSING

Booklets describing the University residence halls and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125 Livingston Hall, Columbia University, New York 27, N. Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. Rates for the academic year are \$200 to \$410 for men and \$230 to \$455 for women. Optional prepaid board plans are available in the men's residence halls. In Johnson Hall, the residents are required to take breakfast and dinner there at a cost of \$350 for the academic year.

Students who wish to live off campus should write or call at the Registry of Off-Campus Accommodations, 115 Livingston Hall, Columbia University, New York 27, for an information sheet which describes the services rendered by the Registry.

International House, a privately owned student residence near the campus, has accommodations for about five hundred students, both foreign and American. Rates for the academic year are \$330 to \$650. To be eligible for admission a student must be over twenty-one and must be registered for at least twelve points. Address the Committee on Admissions, International House, 500 Riverside Drive, New York 27.

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates, available for relatives and guests of members of the University community.

MEDICAL CENTER BOOKSTORE

The Medical Center Bookstore, located on the second floor of the College of Physicians and Surgeons, is maintained for the convenience of the students and staff of the Medical Center schools and hospitals. The store carries a full stock of textbooks and all other student supplies. Substantial savings are effected whenever the rules of manufacturers and publishers permit. The store is open on weekdays from 8:45 A.M. to 5:30 P.M.; Saturdays, 8:45 A.M. to 1:30 P.M.

OFFICERS OF INSTRUCTION

- HAROLD A. ABRAMSON, *Assistant Clinical Professor of Physiology*; A.B., Columbia, 1920; M.D., 1923
- THOMAS H. ALLEN, *Associate Professor of Physiology*; A.B., Iowa, 1936; Ph.D., 1941
- FRANZ ALTMANN, *Associate Clinical Professor of Otolaryngology*; M.D., Vienna, 1925
- VIRGINIA APGAR, *Professor of Anesthesiology*; A.B., Mt. Holyoke, 1929; M.D., Columbia, 1933
- EDMUND APPLEBAUM, *Associate Professor of Dental Anatomy*; D.D.S., New York College of Dentistry, 1922
- HOWARD ARDEN, *Assistant Professor of Dentistry*; B.S., Fordham, 1943; D.D.S., Columbia, 1946
- HERBERT D. AYERS, Jr., *Assistant Clinical Professor of Dentistry*; A.B., Columbia, 1929; D.D.S., 1931
- MARGARET W. BARNARD, *Associate Professor of Public Health Practice*; A.B., Smith, 1917; M.D., Cornell, 1923; D.P.H., Johns Hopkins, 1935
- HENRY A. BARTELS, *Assistant Professor of Oral Pathology*; B.S., Rhode Island State, 1917; B.S., Columbia, 1925; D.D.S., 1927
- HERBERT BARTELSTONE, *Assistant Professor of Pharmacology*; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945
- SAM M. BEISER, *Assistant Professor of Microbiology*; Ph.D., Columbia, 1951
- JAMES W. BENFIELD, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1945
- FRANK E. BEUBE, *Clinical Professor of Dentistry*; L.D.S., D.D.S., Toronto, 1930
- PAUL BRAZEAU, *Assistant Professor of Pharmacology*; A.B., Columbia, 1947; Ph.D., 1952
- HAROLD W. BROWN, *Professor of Parasitology*; A.B., Kalamazoo, 1924; M.S., Kansas State, 1925; Sc.D., Johns Hopkins, 1928; M.D., Vanderbilt, 1933; D.P.H., Harvard, 1936
- STANISLAW H. BRZUSTOWICZ, *Assistant Clinical Professor of Dentistry*; B.S., St. John's, 1940; D.D.S., Columbia, 1943
- JACK BUDOWSKY, *Associate Clinical Professor of Dentistry*; D.D.S., Columbia, 1943
- THEODORE BUNDRANT, *Associate Clinical Professor of Dentistry*; D.D.S., Howard, 1929
- LESTER R. CAHN, *Associate Professor of Oral Pathology*; D.D.S., New York College of Dentistry, 1918
- EDWARD A. CAIN, JR., *Associate Professor of Dentistry*; B.S., Fordham, 1942; D.D.S., Columbia, 1945
- JAMES P. CATTELL, *Assistant Clinical Professor of Psychiatry*; A.B., Miami, 1938; M.D., Harvard, 1942
- NEAL W. CHILTON, *Assistant Professor of Dental Public Health Practice*; B.S., College of the City of New York, 1939; D.D.S., New York University, 1943; M.P.H., Columbia, 1946
- LOUIS J. CIZEK, *Associate Professor of Physiology*; B.S., Fordham, 1937; M.D., Columbia, 1941
- E. GURNEY CLARK, *Professor of Epidemiology*; A.B., Vanderbilt, 1927; M.D., 1931; M.P.H., Johns Hopkins, 1936; D.P.H., 1944
- LOUIS A. COHN, *Associate Clinical Professor of Dentistry*; D.D.S., Pennsylvania, 1928
- WILFRED M. COPENHAVER, *Professor of Anatomy*; A.B., Western Maryland, 1921; Ph.D., Yale, 1925
- JOSEPH A. CUTTITA, *Associate Professor of Dentistry*; A.B., Fordham, 1932; M.S., 1936; D.D.S., Columbia, 1939
- KOURKEN, A. DAGLIAN, *Assistant Clinical Professor of Dentistry*; B.S., College of the City of New York, 1941; D.D.S., Columbia, 1943
- SAMUEL R. DETWILER, *Professor of Anatomy*; Ph.B., Yale, 1914; A.M., 1916; Ph.D., 1918; M.S. (*hon.*), 1931
- NICHOLAS DISALVO, *Assistant Professor of Physiology*; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1952
- EARL T. ENGLE, *Professor of Anatomy*; A.B., Nebraska Wesleyan, 1920; A.M., Colorado, 1924; Ph.D., Stanford, 1925
- BERNARD F. ERLANGER, *Assistant Professor of Microbiology*; A.B., College of the City of New York, 1943; A.M., New York University, 1949; Ph.D., Columbia, 1951
- JOHN W. FERTIG, *Professor of Biostatistics*; A.B., Ursinus, 1931; Ph.D., Minnesota, 1935
- JOSEPH E. FIASCONARO, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1943
- MORRIS FIERSTEIN, *Associate Clinical Professor of Dentistry*; D.D.S., Columbia, 1921
- LEWIS FOX, *Associate Clinical Professor of Dentistry*; D.D.S., Maryland, 1927
- HERBERT P. FRITZ, *Assistant Clinical Professor of Dentistry*; B.S., New York University, 1933; D.D.S., Columbia, 1936
- HARRY A. GALTON, *Associate Clinical Professor of Dentistry*; D.D.S., Columbia, 1932
- LEONARD J. GOLDWATER, *Professor of Occupational Medicine*; A.B., Michigan, 1924; M.D., New York University, 1928; Med.Sc.D., 1937; M.S.P.H., Columbia, 1941
- ROBERT GOTTSEGEN, *Assistant Clinical Professor of Dentistry*; A.B., Michigan, 1939; D.D.S., Columbia, 1943
- MAGNUS I. GREGERSEN, *Dalton Professor of Physiology*; A.B., Stanford, 1923; A.M., 1924; Ph.D., Harvard, 1930
- ROBERT E. HERLANDS, *Associate Professor of Dentistry*; A.B., Columbia, 1941; D.D.S., 1944
- GEORGE W. HINDELS, *Assistant Clinical Professor of Dentistry*; M.D., Vienna, 1938; D.D.S., Columbia, 1943
- LEONARD HIRSCHFELD, *Associate Clinical Professor of Dentistry*; A.B., Columbia, 1941; D.D.S., 1944
- FREDERICK G. HOFMANN, *Assistant Professor of Pharmacology*; A.B., Michigan, 1943; Ph.D., Harvard, 1952
- FRANKLIN HOLLANDER, *Assistant Clinical Professor of Physiology*; B.S., Columbia, 1919; Ph.D., 1923
- ELLEN N. HOSIOSKY, *Assistant Clinical Professor of Dentistry*; D.M.D., Basle, Switzerland, 1935; D.H., Guggenheim Dental Clinic, 1939; D.D.S., Columbia, 1947
- CALDERON HOWE, *Assistant Professor of Microbiology*; A.B., Yale, 1938; M.D., Harvard, 1942
- IRVIN L. HUNT, JR., *Associate Professor of Dentistry*; D.D.S., Pennsylvania, 1929
- ALVIN R. JACOBSON, *Associate Professor of Sanitary Science*; B.S., North Dakota, 1935; M.S., 1937; Ph.D., Iowa, 1941

- JAMES JAY, *Assistant Clinical Professor of Dentistry*; D.D.S., Pennsylvania, 1940
- DOROTHY D. JOHNSON, *Assistant Professor of Anatomy*; A.B., Bates, 1941; A.M., Vassar, 1943; Ph.D., Columbia, 1949
- ELVIN A. KABAT, *Professor of Microbiology*; B.S., College of the City of New York, 1932; A.M., Columbia, 1934; Ph.D., 1937
- MAXWELL KARSHAN, *Associate Professor of Biochemistry*; B.S., College of the City of New York, 1917; A.M., Columbia, 1920; Ph.D., 1925
- MORRIS KAVELLE, *Assistant Clinical Professor of Dentistry*; B.S., New York University, 1929; D.D.S., Columbia, 1933
- BERTRAM KLATSKIN, *Assistant Clinical Professor of Dentistry*; A.B., Cornell, 1937; D.D.S., Columbia, 1941
- LAWRENCE C. KOLB, *Professor of Psychiatry*; M.D., Johns Hopkins, 1934
- JOSEPH M. LEAVITT, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1940
- JESSE L. LEFCOURT, *Assistant Clinical Professor*; B.S., Columbia, 1929; D.D.S., 1931
- BARNET M. LEVY, *Professor of Dentistry*; A.B., Pennsylvania, 1938; D.D.S., 1942; M.S., Virginia, 1944
- GEORGE F. LINDIG, *Associate Clinical Professor of Dentistry*; D.D.S., Minnesota, 1924
- JOHN J. LUCCA, *Assistant Professor of Dentistry*; A.B., New York University, 1941; D.D.S., Columbia, 1947
- WILLIAM MILLER, *Assistant Clinical Professor of Dentistry*; B.S., Columbia, 1927; D.D.S., 1931
- WILLIAM J. MILLER, *Assistant Clinical Professor of Dentistry*; A.B., New York University, 1940; D.D.S., Columbia, 1943
- MELVIN MORRIS, *Assistant Clinical Professor of Dentistry*; B.S., College of the City of New York, 1934; A.M., Columbia, 1937; D.D.S., 1941
- WILLIAM L. NASTUK, *Associate Professor of Physiology*; B.S., Rutgers, 1939; Ph.D., 1945
- ALVIN S. NATHAN, *Associate Clinical Professor of Dentistry*; D.D.S., Columbia, 1926; B.S., New York University, 1935; A.M., 1938
- CARL R. OMAN, *Professor of Dentistry*; D.D.S., Minnesota, 1914
- ARMAND OPPENHEIMER, *Assistant Clinical Professor of Dentistry*; A.B., College of the City of New York, 1926; B.S., Columbia, 1927; D.D.S., 1929
- MAX A. PLEASURE, *Associate Clinical Professor of Dentistry*; D.D.S., Pennsylvania, 1928; M.S.P.H., Columbia, 1941
- ROBIN M. RANKOW, *Assistant Clinical Professor of Oral Surgery*; D.D.S., Columbia, 1940; M.D., Rochester, 1950
- WILLARD C. RAPPLEYE, *Dean, Faculty of Medicine; Vice President in Charge of Medical Affairs; Professor of Medical Economics*; A.B., Illinois, 1915; M.D., Harvard, 1918; A.M., Yale, 1922; Sc.D., Trinity (hon.), 1939; Rutgers (hon.), 1949; Med.Sc.D., Women's Medical College of Pennsylvania (hon.), 1950
- WILLIAM M. ROGERS, *Assistant Professor of Anatomy*; B.S., Georgia, 1921; Ph.D., Cornell, 1927
- WALTER S. ROOT, *Professor of Physiology*; B.S., Wesleyan, 1924; Ph.D., Pennsylvania, 1930
- HARRY M. ROSE, *John E. Borne Professor of Medical and Surgical Research*; A.B., Yale, 1928; M.D., Cornell, 1932
- GEORGE ROSEN, *Professor of Public Health Education*; B.S., College of the City of New York, 1930; M.D., Berlin, 1935; Ph.D., Columbia, 1944; M.P.H., 1947
- SOLOMON N. ROSENSTEIN, *Professor of Dentistry*; B.S., College of the City of New York, 1929; D.D.S., Columbia, 1930
- FRED ROTHENBERG, *Assistant Clinical Professor of Dentistry*; D.M.D., Goettingen, Germany, 1935; D.D.S., Pennsylvania, 1937
- WILLIAM J. SAVOY, *Clinical Professor of Dentistry*; B.S., Manhattan, 1931; D.D.S., Columbia, 1935
- SAUL SCHLUGER, *Associate Clinical Professor of Dentistry*; D.D.S., Louisville, 1931
- L. LASZLO SCHWARTZ, *Clinical Professor of Dentistry*; B.S., College of the City of New York, 1927; D.D.S., Columbia, 1931
- BEATRICE C. SEEGAL, *Associate Professor of Microbiology*; A.B., California, 1918; A.M., 1921; M.D., Johns Hopkins, 1924
- HARRY H. SHAPIRO, *Assistant Professor of Anatomy*; D.M.D., Tufts, 1918
- HAROLD SHERMAN, *Assistant Clinical Professor of Dentistry*; B.S., College of the City of New York, 1935; D.D.S., Michigan, 1946
- WILLIAM H. SILVERSTEIN, *Associate Clinical Professor of Dentistry*; D.D.S., Maryland, 1937
- GEORGE K. SMELSER, *Professor of Anatomy*; A.B., Earlham, 1929; Ph.D., Chicago, 1932
- GILBERT P. SMITH, *Associate Dean (Dental and Oral Surgery); Professor of Dentistry*; D.D.S., Minnesota, 1927
- HARRY P. SMITH, *Delafield Professor of Pathology*; A.B., California, 1916; M.S., 1918; M.D., 1921
- WILLIAM C. SPRING, *DeLamar Professor of Public Health Practice*; M.D., Duke University, 1936; M.P.H., Columbia, 1947
- LEO STERN, SR., *Clinical Professor of Dentistry*; D.D.S., New York College of Dentistry, 1912
- WELLINGTON B. STEWART, *Associate Professor of Pathology*; B.S., Notre Dame, 1942; M.D., Rochester, 1945
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Robin M. Rankow, D.D.S., M.D., *Assistant Attending Surgeon*

* On leave 1957-1958.

CONDENSED ACADEMIC CALENDAR

1957

September 10 Tuesday, and September 11, Wednesday. Registration, including payment of fees.

September 16 Monday. Classes begin.

November 5 Tuesday. Election Day. Holiday.

November 28 Thursday. Thanksgiving Day. Holiday.

November 30 Saturday. End of first trimester.

December 2 Monday. Beginning of second trimester.

December 23 Monday, through

1958

January 5 Sunday. Christmas Holidays.

February 22 Saturday. Washington's Birthday. Holiday.

March 1 Saturday. End of second trimester.

March 3 Monday. Last day for filing application or renewal of application for all degrees and certificates, except doctoral degrees, to be conferred in June. The privilege of later application may be granted on payment of a late fee.

March 3 Monday. Beginning of third trimester.

March 31 Monday, through April 6, Sunday. Easter Holidays.

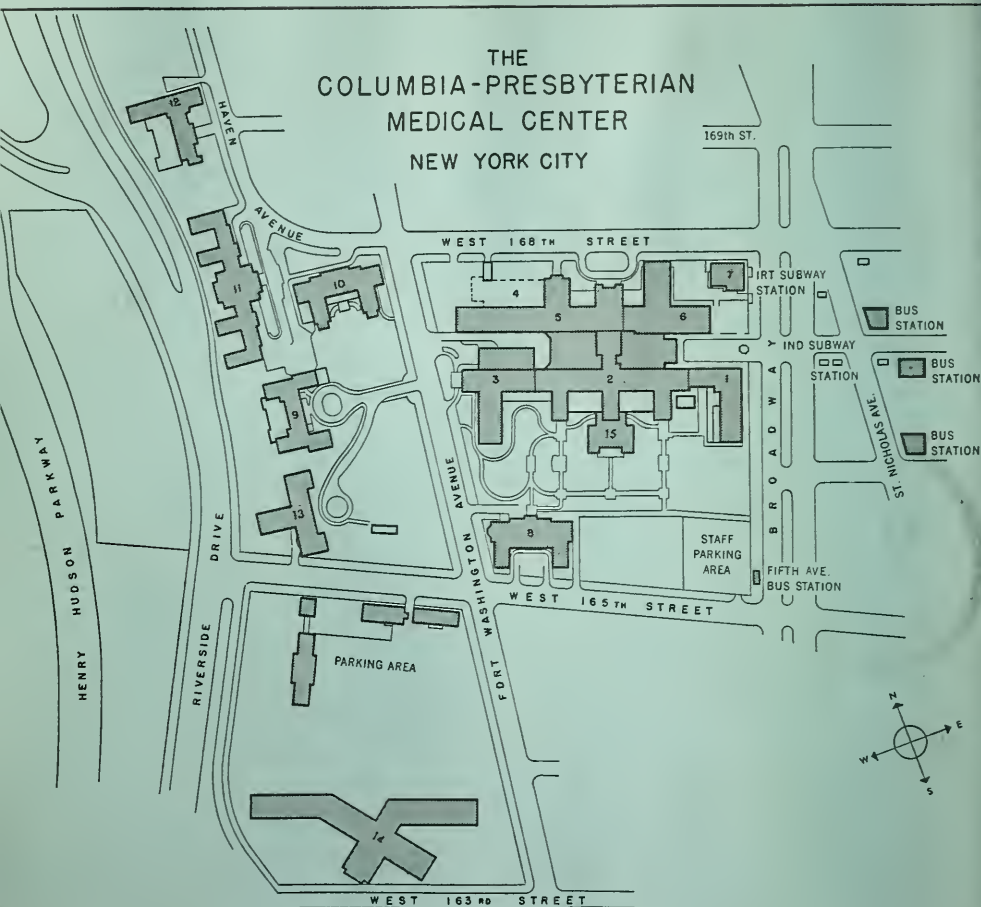
May 24 Saturday. Last day of classes.

May 26 Monday, through June 2, Monday. Final examinations.

May 30 Friday. Memorial Day. Holiday.

June 3 Tuesday. Conferring of degrees.

THE
COLUMBIA-PRESBYTERIAN
MEDICAL CENTER
NEW YORK CITY



- | | |
|---|---|
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SERIES FIFTY-EIGHT • NUMBER TWENTY-NINE • JUNE 1958

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CONDENSED ACADEMIC CALENDAR, 1958-1959

September	8	Monday, and September 9, Tuesday. Registration, including payment of fees.
September	15	Monday. Classes begin.
November	4	Tuesday. Election Day. Holiday.
November	27	Thursday. Thanksgiving Day. Holiday.
November	29	Saturday. End of first trimester.
December	1	Monday. Beginning of second trimester.
December	22	Monday, through January 4, 1959, Sunday. Christmas Holidays.
February	23	Monday. Washington's Birthday. Holiday.
February	28	Saturday. End of second trimester.
March	2	Monday. Last day for filing application or renewal of application for all degrees and certificates, except doctoral degrees, to be conferred in June. The privilege of later application may be granted on payment of a late fee.
March	2	Monday. Beginning of third trimester.
March	23	Monday, through March 29, Sunday. Easter Holidays.
May	23	Saturday. Last day of classes.
May	25	Monday, through May 29, Friday. Final examinations.
May	30	Saturday. Memorial Day. Holiday.
June	2	Tuesday. Conferring of degrees.

COMMUNICATION WITH THE SCHOOL

All communications regarding the School of Dental and Oral Surgery, applications for admission, and appointments for personal interviews should be addressed to the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.; telephone: WAdsworth 3-2500.

The bulletins of each college or school and of the Summer Session may be obtained without charge by writing to the Office of University Admissions, 322 University Hall, New York 27, N.Y.

COLUMBIA UNIVERSITY BULLETIN • SERIES 58 • NO. 29 • JULY 19, 1958 • 5,200 COPIES

Issued at Columbia University, Morningside Heights, New York 27, N.Y., weekly from January for forty-four consecutive issues. Second-class mail privileges authorized at New York, N.Y., under the act of August 24, 1912.

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THE SCHOOL OF DENTAL AND ORAL SURGERY

Columbia University was founded in 1754 as King's College by royal grant of George II, King of England, "for the Instruction of Youth in the Learned Languages, and the Liberal Arts and Sciences." The Revolutionary War interrupted its active work, but in 1784 it was reopened as Columbia College. In 1912 the title was changed to Columbia University in the City of New York.

In May, 1916, the University issued a pamphlet entitled *A Dental School on University Lines*. In this pamphlet the University stated its intent to establish a school of dentistry in affiliation and coordination with the School of Medicine. The pamphlet's introductory statement outlined the University's policy for dental education, which has been consistently followed: "Dentistry and Dental Education are on the threshold of extraordinary development but are unable to take advantage of their opportunities because of the traditional separation of dentistry and medicine. Dentistry has been shown by recent investigation and research to be logically a branch of general medicine."

In September, 1916, students in dentistry were admitted to courses in Columbia University at the School of Medicine. On March 5, 1917, the Trustees of the University established a school of dentistry as of September 27, 1916, and the School of Dentistry became an integral part of the University. On July 1, 1923, the College of Dental and Oral Surgery of New York (organized in 1892) was merged with the School of Dentistry, and the combined institutions named the School of Dental and Oral Surgery of Columbia University.

In September, 1928, the school was moved to the Columbia University-Presbyterian Hospital Medical Center, where the dental department of the School occupies three floors. The fundamental science subjects, which are given to both dental and medical students, are taught in the adjoining College of Physicians and Surgeons, the corridors of the two schools being continuous. In adjacent wings, the halls of which are also continuous with those of the School, the wards and outpatient departments of the Presbyterian and associated hospitals are located, thus giving the closest possible contact and association with all branches of health service. The Dental School clinic includes as one of its functions the dental care of the patients of the Medical Center hospitals.

In order to strengthen the instruction of dental and medical students and to fulfill a further step in the integration of dental education and research with the medical program at the Columbia-Presbyterian Medical Center which was visualized when the Dental School was made a part of the Center in 1928, the faculties of the two schools were merged July 1, 1945. This faculty is responsible for the educational programs in medicine, dentistry, public health, and nursing. A committee on dental education, established by University statute, of which a majority is from the Department of Dental and Oral Surgery and of which the Associate Dean for Dental and Oral Surgery is the chairman, initiates recommendations to the faculty on the qualifications and admission requirements for dental students, the curriculum of instruction, the candidates for the degree of Doctor of Dental Surgery, and other educational matters dealing with dentistry.

The course in dentistry covers four academic years and leads to the degree of Doctor of Dental Surgery. The greater part of the first two years of the curriculum is taken in the fundamental science departments of instruction in the University, which are integral parts of the College of Physicians and Surgeons and the School.

ADMISSION, REGISTRATION, AND FEES

Application. It is desirable that candidates make application during the academic year preceding that for which they seek admission. It is not necessary to complete the academic requirements before making application. However, all requirements must be completed before matriculation. Application blanks will be furnished by the Office of the Committee on Admissions of the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application should be accompanied by a check or money order for \$10, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable and is not credited to tuition.

The minimum requirement for admission to the first-year class is the satisfactory completion of three full years at an acceptable college of arts and sciences, which must include the satisfactory completion of the following courses required by the New York State Board of Regents:

	<i>Semester Hours</i>
English composition and literature	6
Physics	6
Biology	6
Chemistry (inorganic)	6
Chemistry (an approved course in organic chemistry)	6

A point or semester hour is the equivalent of one hour of lecture or recitation plus two hours of outside work or three hours of laboratory work per week, per semester. Suitable laboratory work must be included in each of the courses in science.

Inasmuch as an understanding of the biological sciences is based upon the knowledge of the underlying sciences of chemistry, physics, and biology, students are urged, so far as time permits, to take additional courses in quantitative, qualitative, physical, and organic chemistry, physics, comparative anatomy, and other advanced courses in biology, as well as courses in mathematics, German and French, sociology, history, and other subjects of general cultural and scientific value. Courses in fine and industrial arts are also useful.

Owing to the limited number of students who can be accommodated, completion of the requirements for entrance does not guarantee admission. The entire college record of each student is carefully examined by the Committee on Admissions in order that those who are judged most capable of meeting the exacting demands of the course and of the profession of dentistry may be selected. Preference will be given in the selection of students to those who present to the Committee on Admissions evidence of high achievement in selected college courses of special predental value and who, in the opinion of the Committee on Admissions, are most likely to succeed in dentistry, rather than to those who present the largest number of course credits or those who have limited their preparation to the prescribed subjects. Acceptance of a student for admission is based on grounds of character and health as well as on the fulfillment of academic requirements.

An acceptance fee of \$50 is payable within one month after notification of acceptance (see page 6).

All applicants will be required to take the Dental Aptitude Tests conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

COMBINED COURSES

Combined courses with Barnard College. Under the plan of "professional option" students from Barnard College may receive the Bachelor of Arts degree from Barnard College after the completion of three years of undergraduate work and the first year in the School of Dental and Oral Surgery. To be eligible for this privilege, before entering the dental school, the student must have completed at Barnard 90 points of academic work which includes all specific requirements, a major of 28 points, and the major examination or major thesis.

Combined courses with the School of General Studies. Students from the School of General Studies may exercise the professional option after the completion of ninety-four points, including all the courses prescribed for the Bachelor of Science degree, not less than sixty-four of which have been received for work in Columbia University.

Combined courses in dentistry and medicine. It is usually possible for a graduate of a registered medical school with the degree of Doctor of Medicine to meet the requirements of the school and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one summer session.

ADMISSION OF FOREIGN STUDENTS

The State Department of Education has special requirements with which students who are not citizens of this country must comply. Any foreign student desiring to apply to the School of Dental and Oral Surgery should communicate with the Dean.

REGISTRATION

Before attending University courses, every student must present himself at the Office of the Registrar, file a registration blank giving such information as may be required, and pay his fees. The periods set aside for registration in each session are stated in the Academic Calendar. Registration at a later date is permitted only with the written permission of the Dean, satisfactory cause for the delay having been shown.

FEES

Tuition fees, the University fee, the student health service fee, and laboratory deposits are payable each session in advance and as part of registration. If these fees are paid after the last day of registration (see the Academic Calendar), they will not be reduced, and a late fee of \$3.00 will be imposed.

The following annual fees for the full program for a candidate for the D.D.S. degree are prescribed by statute and are subject to change at any time at the discretion of the Trustees. The fees to be paid by students who are not enrolled for the full program will be assessed by the Registrar as provided by the University statutes.

University fee	\$ 48.00
Tuition fee	1,100.00
Student health service fee	

This fee will be used to pay the annual premium of the Associated Hospital Service of New York for hospital insurance (unless the student is already covered by hospital insurance) and to pay part of the cost of the student health service

25.00

Instrument case rental (for sophomores, juniors, and seniors)	\$5.00
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Application fees

For admission	10.00
For each deficiency or special examination	10.00
For renewal of application for a degree (see below)	1.00

Late fees

For late registration	3.00
For late application for a deficiency or special examination	5.00
For late application, or renewal of application, for a degree	5.00

Rebates

The University fee, the student health service fee, application fees, and late fees are not subject to rebate. If a student withdraws from the University, a partial return of tuition fees may be authorized by the Registrar. When a rebate is allowed, it will be reckoned from the day on which the Registrar receives written notice from the student.

Undue breakage

While no deposit is required of students to cover laboratory material and ordinary breakage, any unusual amount of breakage will be charged.

Renewal of application for a degree. An application for a degree, other than the several doctoral degrees, terminates at the next regular time for the issuance of diplomas subsequent to the date of filing, but it may be renewed for a fee of \$1.00 each time that a candidate chooses to come up for consideration.

Acceptance fee. Within one week after an applicant has been notified that his application has been accepted, he must notify the Dean that he intends to matriculate and accompany his communication with a check or money order for \$50, payable to Columbia University. This acceptance fee will belong to the University and if the applicant does not register at the school for the specific session, it will not be returned. If he registers at the school at the next enrollment of entering students, the amount of the acceptance fee will be deducted from his tuition fees for that session.

Fees for repeated courses. Students obliged to repeat the work for any year are required to pay the full tuition fee.

DENTAL EQUIPMENT

Instruments and supplies. Each student is required to supply himself with instruments as specified in the official instrument list. The purchase from the University of instruments in original package outfits has been made compulsory, and unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. The students will not be allowed to purchase more than is required to complete a case. The quantity and quality are selected with a view to the best possible results and conservation of the student's best interests.

Microscopes. All students entering the School of Dental and Oral Surgery are required to provide themselves with microscopes of a satisfactory type. A microscope of standard make fitted with the following attachments will fill the requirements:

- a. Triple nosepiece.
- b. Abbe or variable focus condenser.
- c. 10x and 6x oculars.
- d. 16 mm. and 4 mm. objectives.
- e. Oil immersion lens.

Lockers. Each student will be assigned a locker on entering and will be required to use a combination lock as prescribed by the school.

ESTIMATED EXPENSES

An itemized estimate of the average expenses of a full-time student for an academic year in the School of Dental and Oral Surgery exclusive of travel, clothing, amusements, charity, organizations, and sundries is given below. These items are, of course, variable but should not be overlooked in estimating the total expense. The room, board, books, instrument, and laundry figures are based upon rates which prevailed during 1957-1958 and can be accepted as applicable in general for the year 1958-1959 unless national economic changes require their alteration.

	<u>Average</u>	<u>Minimum</u>
Tuition and fees	\$1,178	\$1,178
Room	350	300
Board	550	475
Books and instruments (see below)		
Laundry	132	100

In the freshman year, instruments will cost about \$960; in the sophomore year, about \$550; in the junior year, about \$450; in the senior year, about \$90. Estimates are subject to correction as the basic prices of supplies and instruments change. Instruments are to be paid for at the opening of the academic year. The cost of books will vary, depending upon the choice made from the selection offered. In the freshman year, the approximate cost of books will be \$200; in the sophomore year, about \$100; in the junior year, about \$135; in the senior year, about \$30.

PLAN OF INSTRUCTION

The curriculum is arranged with the object of providing the student with the necessary opportunities for acquiring a knowledge of the fundamental sciences in relation to dentistry and the techniques of approach in dental problems. Beginning in the first two academic years with a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology, the student prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skills required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of the dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by means of the division of classes into small sections, conferences, and the comprehensive case method of instruction.

<i>Subjects*</i>	<i>Class Hours</i>	<i>Lab. or Clin. Hours</i>	<i>Total Hours</i>
FIRST YEAR			
Anatomy			
Embryology 152F	22		22
Gross 151FS	50	220	270
Microscopic 150FS	42	126	168
Neuro 153S	20	28	48
Oral 101FS	20	90	110
Oral Microscopic 115S	24	48	72
Biochemistry 150FS	36	108	144
Crown and Bridge 104T	11	66	77
Dental Materials 125T	11	22	33
Operative Dentistry 130T	11	66	77
Prosthetic Dentistry 156T	11	99	110
Theory and Practice			
Dental History 287T	11		11
<i>Total</i>			<i>1,142</i>
SECOND YEAR			
Crown and Bridge 105FST	11	132	143
Dental Materials 126F	11	22	33
Microbiology 151F and 152F	33	99	132
Operative Dentistry 131FST	22	132	154
Pathology 150ST	54	144	198
Periodontology 151T	11	55	66
Pharmacology 150ST	55	33	88
Physiology 150FS	56	153	209

* Letter following course number designates trimester; F=first; S=second; and T=third.

<i>Subjects*</i>	<i>Class Hours</i>	<i>Lab. or Clin. Hours</i>	<i>Total Hours</i>
Prosthetic Dentistry 157FST	11	132	143
Psychiatry 150S	11		11
Surgery, Principles 168S	11		11
Surgery, Oral 270AT	11		11
<i>Total</i>			1,199
THIRD YEAR			
Anatomy, Maxillofacial 252S	11		11
Crown and Bridge Technic 205F		85	85
Clinic 206ST	11	110	121
Applied Occlusal Dynamics 212T	30		30
Diagnosis 212FST	33	25	58
Operative Dentistry 233FST	20	245	265
Orthodontics 241S	22	60	82
Pathology, Oral 246F	22	60	82
Periodontology 251S	11	30	41
Practice of Medicine 278T	22	30	52
Prosthetic Dentistry 260FT and 261 FST	22	165	187
Radiology 267F	11	15	26
Surgery, Oral 270BF	11	20	31
Ethics, Jurisprudence and Practice Administration 280F	11		11
Therapeutics 286T	11		11
<i>Total</i>			1,093
FOURTH YEAR			
Crown and Bridge 210S and 211FST	11	130	141
Diagnosis 213F		25	25
Diagnosis Seminar 214S		30	30
Diagnosis 215T	11		11
Orthodontics 242FST		30	30
Operative Dentistry 234FST	22	313	335
Pedodontics 202FST	22	82	104
Periodontology 252FS and 253F	22	30	52
Prosthetic Dentistry 263FST and 264T	11	130	141
Public Health 222ST	22		22
Surgery, Oral 272FST	44	90	134
Surgery, Seminar 274T	11		11
Surgical Prosthesis 265S	11	19	30
Theory and Practice Clinical Oral Physiology 283F	11		11
Ethics, Jurisprudence and Practice Administration 281FT	22		22
Comprehensive 285T			
<i>Total</i>			1,099

* Letter following course number designates trimester; F=first; S=second; and T=third.

COURSES OF INSTRUCTION

For purposes of instruction the work of each academic year is scheduled in three sessions of eleven weeks each, which are designated as First, Second, and Third Trimesters.

For a detailed statement of the content of each course, the student is referred to the departmental statements which follow.

The outline on pages 8 and 9 shows the work required of a candidate for the degree of Doctor of Dental Surgery. The University reserves the right to make such changes in the program of studies at any time as experience may prove desirable.

ANATOMY

Anatomy 101. Oral anatomy

Professor Arden and staff. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Anatomy 115. Oral microscopic anatomy and embryology

Professor Applebaum and staff. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150. Microscopic anatomy

Professor Copenhaver and staff. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as *Anatomy 101F* in the Medical School.

Anatomy 151. Gross anatomy

Professor Rogers and staff. Freshman year.

Lectures, conferences, and laboratory.

Anatomy 152. Embryology

Professor Copenhaver and staff. Freshman year.

Lectures and demonstrations dealing with the dynamics of vertebrate development, with particular reference to mammals and man.

Anatomy 153. Neuroanatomy

Professors Carpenter and Noback, and assistants. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to *Anatomy 106S* in the Medical School.

Anatomy 252. Maxillofacial anatomy

Professor Shapiro. Junior year.

Lectures and demonstrations. A review course with special application to the problems of the major fields of dentistry.

BIOCHEMISTRY

Biochemistry 150. Introductory biochemistry

Professor Karshan. Freshman year.

Lectures and laboratory. A study of the chemistry of life processes with special reference to the animal organism.

DENTAL MATERIALS

Dental Materials 126. Physical properties of dental materials

Professor Ayers. Freshman and sophomore years.

Lectures and laboratory on the physical and chemical properties of the metals and other materials used in dentistry, with clinical applications.

MEDICINE

Medicine 278. General survey of medicine

Professor Rankow and members of the Presbyterian Hospital staff. Junior year.

Lectures and conferences covering fundamentals of general medicine; also clinics in which patients are studied for conspicuous manifestations of systemic conditions and their significance.

MICROBIOLOGY

Microbiology 151. General medical microbiology and immunology

Dr. Ellison. Sophomore year.

Lectures, conferences, and laboratory.

Microbiology 152. Principles of microbiology, immunology, and epidemiology

Dr. Ellison. Sophomore year.

This course is identical with *Microbiology 105F* in the Medical School except that lectures on the mouth bacteria are substituted for several of those of the medical series.

OPERATIVE DENTISTRY

Operative Dentistry 130. Elements of operative dentistry

Professor Cain and staff. Freshman year.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 131. Elements of operative dentistry

Professor Cain and staff. Sophomore year.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233. Operative clinical practice

Professor Sherman and staff. Junior year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234. Advanced clinical practice

Professor Oman and staff. Senior year.

A continuation in lectures and clinic of *Operative Dentistry 233* with the consideration of special problems in operative practice, including endodontia.

ORTHODONTICS

Orthodontics 241. Principles of orthodontics

Professor Di Salvo and staff. Junior year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and construction of fixed and removable appliances used as space maintainers. In addition, simple appliances used in tooth guidance procedures, which are considered to be within the province of the general practitioners of dentistry, are constructed.

Orthodontics 242. Orthodontic clinic

Professor Di Salvo and staff. Senior year.

Clinical practice in the use of appliances constructed in the laboratory.

PATHOLOGY

Pathology 150. General and special pathology

Professor Lunin. Sophomore year.

A study of important pathological conditions, demonstrated by museum specimens and a very complete series of histological preparations.

Pathology 246. Oral pathology

Professors Cahn and Lunin. Junior year.

Lectures, conferences, and laboratory work on the diseases of the jaws, mouth, and teeth.

Pathology 247. Oral pathology seminar

Professor Cahn. Senior year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS

Pedodontics 202. Pedodontics lectures and clinic

Professor Rosenstein and staff. Senior year.

Lectures, conferences, and clinical practice relating to operative dental procedures for children, management of child dental patients, and application of present knowledge of dental development and preventive dentistry.

PERIODONTOLOGY

Periodontology 151. Periodontia lectures and clinic

Professor Beube and staff. Sophomore year.

Lectures and seminars in the diagnosis, etiology, and treatment of periodontal diseases. Clinical practice in dental prophylaxis and subgingival curettage.

Periodontology 251. Periodontia lectures and clinic

Professor Beube and staff. Junior year.

Lectures and seminars—continuation of *Periodontology 151*. Clinical practice in various periodontal treatments.

Periodontology 252. Periodontia lectures and clinic

Professor Beube and staff. Senior year.

Continuation of *Periodontology 251*.

Periodontology 253. Periodontia clinic

Professor Beube and staff. Senior year.

Work in clinics in the diagnosis and treatment of advanced periodontal diseases.

PHARMACOLOGY

Pharmacology 150. Pharmacology

The staff. Sophomore year.

Lectures, conferences, and laboratory. In this course the pharmacological action of drugs on man and lower animals is studied. Principles are emphasized so as to furnish a rational basis for therapy by drugs.

PHYSIOLOGY

- Physiology 150. Mammalian physiology**
 Professor Root and staff. Sophomore year.
 Lectures, conferences, and laboratory.

PROSTHETIC DENTISTRY

- Prosthetics 104 and 105. Crown and bridge lectures and technique**
 Professor Arden and staff. Freshman and sophomore years.
 Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.
- Prosthetics 156 and 157. Prosthetic lectures and technique**
 Professor Arden and staff. Freshman and sophomore years.
 Lectures and technical procedures in full and partial denture construction.
- Prosthetics 205. Crown and bridge lectures and technique**
 Professor Herlands. Junior year.
 Lectures on the clinical procedures in crown and bridgework.
- Prosthetics 206. Crown and bridge clinic**
 Professor Herlands and staff. Junior year.
 Clinical construction of elementary crown and bridgework.
- Prosthetics 210. Crown and bridge lectures**
 Professor Herlands. Senior year.
 Lectures and conferences on various types of bridgework.
- Prosthetics 211. Crown and bridge clinic**
 Professor Smith and staff. Senior year.
 Clinical construction of crown and bridgework.
- Prosthetics 212. Applied occlusal dynamics**
 Professor Cohn. Junior year.
 Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.
- Prosthetics 260. Prosthetic lectures**
 Professors Lucca and Hindels. Junior year.
 Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.
- Prosthetics 261. Prosthetic clinic**
 Professor Lucca and staff. Junior year.
 Clinical construction of full and partial dentures.
- Prosthetics 263. Prosthetic clinic**
 Professor Smith and staff. Senior year.
 Clinical construction of full and partial dentures.
- Prosthetics 264. Prosthetic lectures**
 Professor Lucca. Senior year.
 A series of lectures on clinical consideration in prosthodontic diagnosis, design, and construction.
- Prosthetics 265. Surgical prosthesis**
 Dr. Bruno. Senior year.
 Lectures and technical procedures in maxillofacial and surgical prosthesis.

PSYCHIATRY

Psychiatry 150. Psychiatry for the dentist

Professor Cattell. Sophomore year.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH

Public Health 222. Principles of public health

Professor Bushel and staff. Senior year.

Survey course in the theory and practice of preventive medicine, dentistry, and public health. Fundamental principles of administration, statistics, epidemiology, industrial hygiene, and sanitation. The principles and problems of dental health practice are emphasized.

STOMATOLOGY

Diagnosis 212. Diagnosis lectures and clinic

Professor Zegarelli and staff. Junior year.

Lectures and clinical practice in diagnostic methods, comprehensive diagnosis, pulp symptomatology, radiographic interpretation, and diagnosis of lesions and diseases of the oral cavity and jaws.

Diagnosis 213. Diagnosis clinic

The staff. Senior year.

Continuation of clinic of *Diagnosis 212*.

Diagnosis 214. Diagnosis seminar

Professor Zegarelli. Senior year.

Discussion and differential diagnosis of diseases of the oral cavity and jaws.

Diagnosis 215. Diagnosis seminar

Professor Zegarelli and staff. Senior year.

Continuation of *Diagnosis 214*.

Radiology 267. Oral radiology practice

Professor Budowsky and staff. Junior year.

Lectures, readings, and discussions on topics relative to oral radiology. Practice in exposing, processing, and mounting dental radiographs.

Therapeutics 286.

Dr. Kutscher. Junior year.

Lectures and conferences on drugs and their clinical application.

SURGERY

Surgery 168. Principles of surgery

Professor Rankow. Sophomore year.

Lectures, seminars, and basic principles of general surgery.

Surgery 270A. Oral surgery

Professor Rothenberg. Sophomore year.

Lectures and seminars on local anesthesia and removal of teeth.

Surgery 270B. Oral surgery

Professor Savoy and staff. Junior year.

Demonstrations, lectures, and clinical practice in local anesthesia and the removal of teeth.

Surgery 272. Oral surgery

Professor Savoy and staff. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia.

Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274. Oral surgery seminar

Professors Savoy, Rankow, and staff. Senior year. Required.

Lectures and seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation.

THEORY AND PRACTICE OF DENTISTRY

Theory and Practice 280. Dental ethics, jurisprudence, and practice administration

Professor Hunt. Junior year.

Lectures covering opportunities in the field of dentistry, selecting a location, planning and equipping an office; development of habits leading to personal health and professional success. Introduction to dental ethics and the law relating to dental practice. Handling patients under clinic conditions, and dental records.

Theory and Practice 281. Dental ethics, jurisprudence, and practice administration

Professor Hunt. Senior year.

Lectures and seminars covering the codes of ethics, intraprofessional relations, areas of legal liability, malpractice, contracts, establishing fees, office procedures, psychology of handling patients and practice building.

Theory and Practice 283. Clinical oral physiology

Professor Schwartz and staff. Senior year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and clinical conferences.

Theory and Practice 285. Comprehensive case

The staff. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of x-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 287. Dental history

Professor Schwartz. Freshman year.

Lectures and conferences on the development of the scientific and technical principles of modern dentistry.

TEXTBOOKS

The following list includes most of the books normally used. As a rule, only the latest editions of the textbooks should be purchased. Students are warned against buying any books until specifically advised by the departments concerned.

ANATOMY. GROSS ANATOMY: One of the following three: Gray's *Anatomy*; Cunningham, *Textbook of Anatomy*; or Morris, *Human Anatomy*. One of the following three dictionaries: Stedman, Gould, or Dorland's American. Cunningham, *Manual of Practical Anatomy*, Vols. II and III. One of the following four: Grant, *Atlas of Anatomy*; Truex and Kellner, *Detailed Atlas of the Head and Neck*; Spalteholz, *Hand Atlas of Human Anatomy*; or Anson, *Atlas of Human Anatomy*.

MAXILLOFACIAL ANATOMY: Shapiro, *Applied Anatomy of the Head and Neck* (1954 ed.).

EMBRYOLOGY: One of the following three: Arey, *Developmental Anatomy*; Hamilton, *Human Embryology*; or Patten, *Human Embryology*.

MICROSCOPIC ANATOMY: Bailey, *Textbook of Histology* (14th ed.); mimeographed laboratory manual.

NEUROANATOMY: Strong and Elwyn, *Human Neuroanatomy*; mimeographed laboratory manual.

ORAL HISTOLOGY AND EMBRYOLOGY: Orban, *Oral Histology and Embryology*; Diamond, *Dental Anatomy*.

BIOCHEMISTRY: Harrow and Mazur, *Textbook of Biochemistry* (7th ed.); Karshan, *Laboratory Manual of Biochemistry for Dental Students*.

DENTAL ETHICS, JURISPRUDENCE, and PRACTICE ADMINISTRATION: Mann and Easlick, *Practice Administration for the Dentist*; Carnahan, *The Dentist and the Law*.

DENTAL HISTORY: Brenner, *Story of Dentistry* (3d ed.).

DENTAL THERAPEUTICS: Council on Therapeutics, American Dental Association, *Accepted Dental Remedies*. (Reference: Goodman and Gilman, *Pharmacological Basis of Therapeutics*, 1955.)

DIAGNOSIS: Thoma, *Oral Pathology* (4th ed.); Burket, *Oral Medicine* (2d ed.); Bernier, *The Management of Oral Disease*.

MEDICINE: One of the following two: Cecil and Loeb, *Textbook of Medicine* (9th ed.); Harrison, *Principles of Internal Medicine* (3d ed.).

MICROBIOLOGY: Laboratory Manual in Microbiology and Immunology; Dubos, *Bacterial and Mycotic Infections of Man* (3d ed.); Rivers, *Viral and Rickettsial Diseases of Man* (3d ed.).

OPERATIVE DENTISTRY: Black, *Operative Dentistry*, Vols. I and II (9th ed.); *Operative Dentistry Syllabus*; Grossman, *Root Canal Therapy*.

ORAL PATHOLOGY: Thoma, *Oral Pathology* (3d ed.); or Kronfeld, *Histopathology of the Teeth* (4th ed.).

- ORTHODONTICS: Salzmann, *Orthodontics, Principles and Prevention*; Vol. 1 (1957).
- PATHOLOGY: One of the following three: Boyd, *Textbook of Pathology*; Karsner, *Textbook of Pathology*; or Anderson, *Pathology*.
- PEDODONTICS: Brauer *et al.*, *Dentistry for Children* (3d ed.).
- PERIODONTOLOGY: Beube, *Periodontology*; and Goldman, *Periodontia*.
- PHARMACOLOGY: Goodman and Gilman, *Pharmacological Basis of Therapeutics* (1955).
- PHYSIOLOGY: Bard, *Medical Physiology* (10th ed.).
- PROSTHETIC DENTISTRY: Skinner, *Science of Dental Materials*; Schlosser and Gehl, *Complete Denture Prosthesis*; Swenson, *Complete Dentures*; Tylman, *Crown and Bridge Prosthesis*; United States Government Printing Office, *Physical Properties of Dental Materials*.
- PSYCHIATRY: English and Finch, *Introduction to Psychiatry* (2d ed.); Noyes and Kolb, *Modern Clinical Psychiatry* (5th ed., 1958).
- RADIOLOGY: McCall and Wald, *Clinical Dental Roentgenology* (3d ed.).
- SURGERY: Berger, *Principles and Technique of the Removal of Teeth*; Archer, *A Manual of Oral Surgery*; Monheim, *Local Anaesthesia and Pain Control in Dental Practice*.
- SURGICAL PROSTHESIS: Beder, *Surgical and Maxillofacial Prosthesis*.

POSTGRADUATE TRAINING

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1958-1959 short refresher courses will be offered in various subjects. Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses.

The School of Dental and Oral Surgery is also authorized to grant certificates of training in special branches of dentistry. Study for the certificate of training includes special work in the clinical and basic science branches of dentistry approved by the Dean. At present, an organized sixteen-month course is offered to qualify graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, and periodontology.

For further information see the bulletin of Postgraduate Courses for Dentists, which may be obtained from the Dean, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University: anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the bulletin of the Graduate Faculties, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N.Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Executive Officer, School of Public Health and Administrative Medicine, 600 West 168th Street, New York 32, N.Y.

GENERAL REGULATIONS

Each person whose registration has been completed will be considered a student of the University during the session for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is first registered.

The privileges of the University are not available to any student until he has completed his registration. Since, under the University statutes, payment of fees is a part of registration, no student's registration is complete until his fees have been paid. No student is permitted to attend any University course for which he is not officially registered, nor may any student register after the stated period unless he obtains the written consent of the proper dean or director.

Students are held accountable for absences incurred owing to late enrollment. Any student whose religious duties conflict at any time with academic requirements should apply to the proper dean or director for an equitable solution.

REQUIREMENTS FOR PROMOTION

a) A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the class officers of instruction under whom he has studied during the preceding year.

b) The School of Dental and Oral Surgery reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions of study in the school.

Students are classified for readmission or promotion under the following headings:

1. Recommended for advancement.
2. Recommended for readmission to the same class.
3. Recommended neither for advancement nor for readmission to the same class:
 - (a)* Because of failure.
 - (b)* Because they fall under paragraph *b* of requirements for promotion.

GRADING OF STUDENTS

The following grade equivalents are used: A, excellent; B, good; C, fair; F, failure.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems advisable. The disciplinary authority of the University is vested in the President in such cases as he deems proper and, subject to the reserved powers of the President, in the dean of each faculty and the director of the work of each administrative board.

WITHDRAWAL

An honorable discharge will always be granted to any student in good academic standing, and not subject to discipline, who may desire to withdraw from the University; but no student under the age of twenty-one years shall be entitled to a discharge without the assent of his parent or guardian furnished in writing to the proper dean or director. Students withdrawing are required to notify the Registrar in writing at once.

The dean or director may, for reasons of weight, grant a leave of absence to a student in good standing.

REQUIREMENTS FOR GRADUATION

In addition to complying with the requirements for admission and to completing the required work of the curriculum, each candidate for the degree of Doctor of Dental Surgery must present satisfactory evidence as required by law of good moral character and of having attained the age of twenty-one years. If the candidate has been admitted to advanced standing, he must have spent not less than four academic years or their equivalent in approved medical or dental colleges in the study of the subjects making up the curriculum of the School of Dental and Oral Surgery.

No degree will be granted to a student who has not registered for and attended at Columbia University courses of instruction equivalent to at least one academic year of full-time work.

Diplomas are issued at the times stated in the Academic Calendar; those for the degree of Doctor of Philosophy, however, are issued at any time during the year upon completion of requirements by the candidate.

GENERAL INFORMATION

LIBRARY

The Medical Library occupies parts of the three lower floors in the College of Physicians and Surgeons. It provides current literature (both books and journals) for faculty and students, and it aids in research through its own collections of current and historical works and through its unique bibliographic service.

The Library contains approximately two hundred and fifteen thousand volumes of books and journals, some five thousand pamphlets, and about two thousand lantern slides on the history of medicine. More than twenty-five hundred periodicals are received regularly. A professional library staff is available to aid students, faculty, and research workers in the Schools of Medicine, Dentistry, Nursing, Public Health and Administrative Medicine, and the hospitals of the Medical Center.

The libraries on Morningside Heights, containing about three million volumes, are open to all students. They include collections on biology, chemistry, physics, psychology, sociology, and other subjects related to medicine and dentistry and supplement the special collections available in the Medical Library. Books may be borrowed for home use.

The Medical Library is open Monday through Friday, 8:30 a.m. to 10 p.m.; Saturday, 9 a.m. to 6 p.m.; and Sunday, 12 m. to 5 p.m. during the academic year. Each of the other libraries posts the hours it is open.

FINANCIAL AID AND PRIZES

Three Ellis Fellowships are awarded annually to qualified graduates of any of the colleges of recognized rank in the state of Vermont. The holders of these fellowships may pursue resident graduate studies under any one of the graduate schools maintained by the University and are eligible for reappointment for no more than two additional years with the proviso that a holder of the fellowship who is a student in medicine may be eligible for reappointment for no more than three additional years. The annual stipend is \$1,500. Applications should be submitted on or before February 20 on blanks to be filed with the Office of University Admissions.

The Van Woert Scholarship Fund was established by the alumni of the School of Dental and Oral Surgery in 1940. The award is given annually to a senior student in the dental school who stands high in scholastic attainments, in personal character, and in potentiality of being a credit to Columbia University and the dental profession.

A prize known as the Ella Maria Ewell Medal is awarded annually to the student of the School of Dental and Oral Surgery who, in the judgment of the faculty, is most proficient in some subject of dentistry.

The Alumni Association makes an annual award of the Rowe-Wiberg Medal to the senior student who has shown the greatest proficiency in prosthetic dentistry.

The William Bailey Dunning Medal, established by the Alumni Association in 1957, is awarded annually to the senior student most proficient in periodontology.

The staff of the Division of Operative Dentistry gives an annual prize for excellence in operative dentistry.

See also "Graduate Courses in the Basic Sciences" on page 18.

Student Loans

Long-term loans at low interest rates are available for tuition and fees, and under certain circumstances, for living expenses. Students who need loans for the winter session should file application with the Bursar, 310 University Hall, by September 1; for the winter session, by December 15. Only in rare instances will applications be considered after these dates.

Student Employment

Owing to the heavy schedule of the Dental School, it is difficult for dental students to undertake outside part-time work during the academic year and, so far as practical, other financial arrangements should be made.

STUDENT ORGANIZATIONS

Blanks for the registration of student organizations, other than those for which the responsibility is assumed by a faculty or department of instruction, may be obtained at the room assignment desk in the Office of the Registrar, 315 University Hall.

Such student organizations come under the jurisdiction of the Committee on Student Organizations of the University Council and may be granted the privileges of the use of names in which the name of the University is embodied or suggested and the use of University rooms or grounds for meetings and bulletin boards for announcements, only if they have filed their registration blanks, furnishing the committee with lists of officers and other executive members, statements of purposes, copies of constitutions and bylaws, and information concerning the nature of any affiliation or connection with non-University organizations.

Omicron Kappa Upsilon

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity, was chartered in the School of Dental and Oral Surgery in 1934. The purpose of this organization is to recognize and honor a maximum of 12 percent of the members of the graduating Senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

The William Jarvie Society

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and for which Sophomores, Juniors, and Seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N. Y. All applications for admission to the examination should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

COURSES FOR DENTAL HYGIENISTS

On October 21, 1947, the University Council approved the establishment of the degree of Bachelor of Science to be conferred upon students who, having been admitted on the basis of two years of approved college study covering not less than sixty points, complete the course of instruction in the field of dental hygiene.

The course prepares graduates for all types of dental health positions including permanent dental hygiene teachers' license in New York State and the educational requirements for dental hygienists in public health as stated in the May 1, 1956, report, Committee on Education, American Public Health Association.

The Master of Science degree in dental hygiene has been established in administration, supervision, and clinical teaching of dental hygiene to fill the demand for women with graduate education who are qualified to assume teaching and supervisory positions in schools for dental hygienists. It also provides opportunity for administrators, supervisors, and instructors presently employed to complete a graduate degree in dental hygiene.

For a special bulletin describing the programs of study address the Director, Courses for Dental Hygienists, 630 West 168th Street, New York 32, N.Y.

UNIVERSITY PRIVILEGES

All students enrolled in the Dental School enjoy the privileges and facilities of the University campus, including access to the gymnasium, and other activities.

The gymnasium is situated on Morningside Heights and is open daily, except Sundays and holidays. Students of the School of Dental and Oral Surgery may enjoy its privileges and have the use of the gymnasium, baths, and private lockers. A service charge of \$3.00 per session (winter, spring, or summer), is charged each student using the facilities of the University gymnasium without formal registration in physical education courses. The student receives locker privileges, a towel, complete uniform (except shoes), and laundry service.

STUDENT HEALTH SERVICE

The Student Health Service is located in Room 2-220, Vanderbilt Clinic. Daily office hours are held for sick students. Emergency treatment after 5 P.M. and on week ends may be obtained in Admitting Emergency, Vanderbilt Clinic. Students sick at home and living within the immediate vicinity of the Medical Center may contact the Physician-in-Charge of the Health Service. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under a hospitalization insurance policy.

RELIGIOUS LIFE

The life of the University community finds religious expression through St. Paul's Chapel and Earl Hall and through the ministry of the Chaplain and those associated

with him in his work. The Chaplain of the University is assisted by three religious counselors: the counselor to Protestant students, the counselor to Roman Catholic students, and the counselor to Jewish students.

Daily services are held in the Chapel, and students are urged to familiarize themselves with the schedules, which are conveniently posted.

There are a number of student religious organizations to which the Chaplain and counselors serve as advisers and with which students are cordially urged to affiliate themselves.

The Chaplain and the counselors are especially eager to establish warm personal relations with students and to meet them in consultation, at the Chapel or in their offices in Earl Hall.

HOUSING

Booklets describing the University residence halls and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125 Livingston Hall, Columbia University, New York 27, N. Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. Rates for the academic year are \$260 to \$425 for men and \$340 to \$485 for women. Optional prepaid board plans are available in the men's residence halls. In Johnson Hall, the residents are required to take breakfast and dinner there at a cost of \$375 for the academic year.

Students who wish to live off campus should write or call at the Registry of Off-Campus Accommodations, 115 Livingston Hall, Columbia University, New York 27, for an information sheet which describes the services rendered by the Registry.

International House, a privately owned student residence near the campus, has accommodations for about five hundred students, both foreign and American. Rates for the academic year are \$345 to \$630. To be eligible for admission a student must be over twenty-one and must be registered for at least twelve points or for a program of full-time research. Address the Committee on Admissions, International House, 500 Riverside Drive, New York 27.

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates, available for relatives and guests of members of the University community.

MEDICAL CENTER BOOKSTORE

The Medical Center Bookstore, located on the second floor of the College of Physicians and Surgeons, is maintained for the convenience of the students and staff of the Medical Center schools and hospitals. The store carries a full stock of textbooks and all other student supplies. Substantial savings are effected whenever the rules of manufacturers and publishers permit. The store is open on weekdays from 8:45 A.M. to 5:30 P.M.; Saturdays, 8:45 A.M. to 1:30 P.M.

OFFICERS OF INSTRUCTION

- THOMAS H. ALLEN, *Associate Professor of Physiology*; A.B., Iowa, 1936; Ph.D., 1941
- FRANZ ALTMANN, *Clinical Professor of Otolaryngology*; M.D., Vienna, 1925
- VIRGINIA APGAR, *Professor of Anesthesiology*; A.B., Mt. Holyoke, 1929; M.D., Columbia, 1933
- EDMUND APPELBAUM, *Associate Professor of Dental Anatomy*; D.D.S., New York College of Dentistry, 1922
- HOWARD ARDEN, *Associate Professor of Dentistry*; B.S., Fordham, 1943; D.D.S., Columbia, 1946
- HERBERT D. AYERS, JR., *Associate Clinical Professor of Dentistry*; A.B., Columbia, 1929; D.D.S., 1931
- MARGARET W. BARNARD, *Associate Professor of Public Health Practice*; A.B., Smith, 1917; M.D., Cornell, 1923; D.P.H., Johns Hopkins, 1935
- HERBERT J. BARTELSTONE, *Assistant Professor of Pharmacology*; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945
- SAM M. BEISER, *Assistant Professor of Microbiology*; Ph.D., Columbia, 1951
- JAMES W. BENFIELD, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1945
- FRANK E. BEUBE, *Clinical Professor of Dentistry*; L.D.S., D.D.S., Toronto, 1930
- HAROLD W. BROWN, *Professor of Parasitology*; A.B., Kalamazoo, 1924; M.S., Kansas State, 1925; Sc.D., Johns Hopkins, 1928; M.D., Vanderbilt, 1933; D.P.H., Harvard, 1936; LL.D. (hon.), Puerto Rico, 1954
- STANISLAW H. BRZUSTOWICZ, *Assistant Clinical Professor of Dentistry*; B.S., St. John's, 1940; D.D.S., Columbia, 1943
- JACK BUDOWSKY, *Associate Clinical Professor of Dentistry*; D.D.S., Columbia, 1943
- THEODORE BUNDRANT, *Associate Clinical Professor of Dentistry*; D.D.S., Howard, 1929
- ARTHUR BUSHEL, *Adjunct Associate Professor of Dental Public Health Practice*; A.B., Brooklyn, 1940; D.D.S., Columbia, 1943; M.P.H., 1947
- LESTER R. CAHN, *Associate Professor of Oral Pathology*; D.D.S., New York College of Dentistry, 1918
- EDWARD A. CAIN, JR., *Associate Professor of Dentistry*; B.S., Fordham, 1942; D.D.S., Columbia, 1945
- JAMES P. CATTELL, *Assistant Clinical Professor of Psychiatry*; A.B., Miami, 1938; M.D., Harvard, 1942
- LOUIS J. CIZEK, *Associate Professor of Physiology*; B.S., Fordham, 1937; M.D., Columbia, 1941
- E. GURNEY CLARK, *Professor of Epidemiology*; A.B., Vanderbilt, 1927; M.D., 1931; M.P.H., Johns Hopkins, 1936; D.P.H., 1944
- LOUIS A. COHN, *Associate Clinical Professor of Dentistry*; D.D.S., Pennsylvania, 1928
- WILFRED M. COPENHAVER, *Professor of Anatomy*; A.B., Western Maryland, 1921; Ph.D., Yale, 1925
- JOSEPH A. CUTTITA, *Associate Professor of Dentistry*; A.B., Fordham, 1932; M.S., 1936; D.D.S., Columbia, 1939
- KOURKEN A. DAGLIAN, *Assistant Clinical Professor of Dentistry*; B.S., College of the City of New York, 1941; D.D.S., Columbia, 1943
- JOSEPH C. DE LISI, *Assistant Professor of Dentistry*; D.D.S., Columbia, 1952
- NICHOLAS A. DISALVO, *Professor of Dentistry*; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1952
- BERNARD F. ERLANGER, *Assistant Professor of Microbiology*; A.B., College of the City of New York, 1943; A.M., New York University, 1949; Ph.D., Columbia, 1951
- JOHN W. FERTIG, *Professor of Biostatistics*; A.B., Ursinus, 1931; Ph.D., Minnesota, 1935
- JOSEPH E. FIASCONARO, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1943
- MORRIS FIERSTEIN, *Associate Clinical Professor of Dentistry*; D.D.S., Columbia, 1921
- LEWIS FOX, *Associate Clinical Professor of Dentistry*; D.D.S., Maryland, 1927
- HERBERT P. FRITZ, *Assistant Clinical Professor of Dentistry*; B.S., New York University, 1933; D.D.S., Columbia, 1936
- HARRY A. GALTON, *Clinical Professor of Dentistry*; D.D.S., Columbia, 1932
- LEONARD J. GOLDWATER, *Professor of Occupational Medicine*; A.B., Michigan, 1924; M.D., New York University, 1928; Med.Sc.D., 1937; M.S.P.H., Columbia, 1941
- ROBERT GOTTSEGEN, *Associate Clinical Professor of Dentistry*; A.B., Michigan, 1939; D.D.S., Columbia, 1943
- MAGNUS I. GREGERSEN, *Dalton Professor of Physiology*; A.B., Stanford, 1923; A.M., 1924; Ph.D., Harvard, 1930
- ROBERT E. HERLANDS, *Associate Professor of Dentistry*; A.B., Columbia, 1941; D.D.S., 1944
- GEORGE W. HINDELS, *Associate Clinical Professor of Dentistry*; M.D., Vienna, 1938; D.D.S., Columbia, 1943
- LEONARD HIRSCHFELD, *Associate Clinical Professor of Dentistry*; A.B., Columbia, 1941; D.D.S., 1944
- FREDERICK G. HOFMANN, *Assistant Professor of Pharmacology*; A.B., Michigan, 1943; Ph.D., Harvard, 1952
- FRANKLIN HOLLANDER, *Assistant Clinical Professor of Physiology*; B.S., Columbia, 1919; Ph.D., 1923
- ELLEN N. HOSIOSKY, *Assistant Clinical Professor of Dentistry*; D.M.D., Basle, Switzerland, 1935; D.H., Guggenheim Dental Clinic, 1939; D.D.S., Columbia, 1947
- CALDERON HOWE, *Associate Professor of Microbiology*; A.B., Yale, 1938; M.D., Harvard, 1942
- IRVIN L. HUNT, JR., *Associate Professor of Dentistry*; D.D.S., Pennsylvania, 1929
- ALVIN R. JACOBSON, *Associate Professor of Sanitary Science*; B.S., North Dakota, 1935; M.S., 1937; Ph.D., Iowa, 1941
- JAMES JAY, *Associate Clinical Professor of Dentistry*; D.D.S., Pennsylvania, 1940
- DOROTHY D. JOHNSON, *Assistant Professor of Anatomy*; A.B., Bates, 1941; A.M., Vassar, 1943; Ph.D., Columbia, 1949
- ELVIN A. KABAT, *Professor of Microbiology*; B.S., College of the City of New York, 1932; A.M., Columbia, 1934; Ph.D., 1937
- MAXWELL KARSHAN, *Associate Professor of Biochemistry*; B.S., College of the City of New York, 1917; A.M., Columbia, 1920; Ph.D., 1925

- MORRIS KAVELLE, *Assistant Clinical Professor of Dentistry*; B.S., New York University, 1929; D.D.S., Columbia, 1933
- BERTRAM KLATSKIN, *Assistant Clinical Professor of Dentistry*; A.B., Cornell, 1937; D.D.S., Columbia, 1941
- LAWRENCE C. KOLB, *Professor of Psychiatry*; M.D., Johns Hopkins, 1934
- JOSEPH M. LEAVITT, *Assistant Clinical Professor of Dentistry*; D.D.S., Columbia, 1940
- JESSE L. LEFCOURT, *Assistant Clinical Professor of Dentistry*; B.S., Columbia, 1929; D.D.S., 1931
- GEORGE F. LINDIG, *Associate Clinical Professor of Dentistry*; D.D.S., Minnesota, 1924
- FRANCIS J. LOUGHLIN, *Assistant Clinical Professor of Dentistry*; D.D.S., New York University, 1939
- JOHN J. LUCCA, *Associate Professor of Dentistry*; A.B., New York University, 1941; D.D.S., Columbia, 1947
- MARTIN LUNIN, *Assistant Professor of Oral Pathology*; B.S., Oklahoma, 1938; D.D.S., Washington, 1950; M.P.H., Columbia, 1952
- IRWIN D. MANDEL, *Assistant Clinical Professor of Dentistry*; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945
- H. HOUSTON MERRITT, *Professor of Neurology*; A.B., Vanderbilt, 1922; M.D., Johns Hopkins, 1926; A.M. (*hon.*), Harvard, 1944
- WILLIAM MILLER, *Assistant Clinical Professor of Dentistry*; B.S., Columbia, 1927; D.D.S., 1931
- WILLIAM J. MILLER, *Associate Clinical Professor of Dentistry*; A.B., New York University, 1940; D.D.S., Columbia, 1943
- MELVIN MORRIS, *Associate Clinical Professor of Dentistry*; B.S., College of the City of New York, 1934; A.M., Columbia, 1937; D.D.S., 1941
- WILLIAM L. NASTUK, *Associate Professor of Physiology*; B.S., Rutgers, 1939; Ph.D., 1945
- ALVIN S. NATHAN, *Associate Clinical Professor of Dentistry*; D.D.S., Columbia, 1926; B.S., New York University, 1935; A.M., 1938
- CHARLES R. NOBACK, *Associate Professor of Anatomy*; B.S., Cornell, 1936; M.S., New York University, 1938; Ph.D., Minnesota, 1942
- CARL R. OMAN, *Professor of Dentistry*; D.D.S., Minnesota, 1914
- ARMAND OPPENHEIMER, *Assistant Clinical Professor of Dentistry*; A.B., College of the City of New York, 1926; B.S., Columbia, 1927; D.D.S., 1929
- MAX A. PLEASURE, *Associate Clinical Professor of Dentistry*; D.D.S., Pennsylvania, 1928; M.S.P.H., Columbia, 1941
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- WILLIAM M. ROGERS, *Assistant Professor of Anatomy*; B.S., Georgia, 1921; Ph.D., Cornell, 1927
- WILLIAM S. ROOT, *Professor of Physiology*; B.S., Wesleyan, 1924; Ph.D., Pennsylvania, 1930
- HARRY M. ROSE, *John E. Borne Professor of Medical and Surgical Research*; A.B., Yale, 1928; M.D., Cornell, 1932
- GEORGE ROSEN, *Professor of Public Health Education*; B.S., College of the City of New York, 1930; M.D., Berlin, 1935; Ph.D., Columbia, 1944; M.P.H., 1947
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 RICHARD GLIEDMAN, D.D.S., *Assistant in Dentistry*
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 GEORGE KIRIAKOPOULOS, D.D.S., *Instructor in Dentistry*
 ALICE W. KNOX, Ph.D., *Associate in Microbiology*
 ABRAHAM KOPREN, D.D.S., *Instructor in Dentistry*
 SEYMOUR KOSTER, D.D.S., *Assistant in Dentistry*
 PHILIP KUTNER, D.D.S., *Instructor in Dentistry*
 AUSTIN H. KUTSCHER, D.D.S., *Research Associate in Dentistry*
 HENRY P. LEVY, D.D.S., *Instructor in Anatomy*
 EVAID LINDER, *Instructor in Dental Technique*
 JULIUS K. LITTMAN, M.D., *Instructor in Anatomy*
 LOUIS J. LOSCALZO, D.D.S., *Instructor in Dentistry*
 JOSEPH LUBAN, D.D.S., *Research Assistant in Dentistry*
 GEORGE V. LYONS, D.D.S., *Instructor in Dentistry*
 HARRIET G. MCCORMICK, Ph.D., *Lecturer in Dental Hygiene*
 PATRICIA A. MCLEAN, R.D.H., *Instructor in Dental Hygiene*
 LAWRENCE MARDER, D.D.S., *Instructor in Dentistry*
 SAUL MISHELOFF, D.D.S., *Lecturer in Dentistry*
 HENRY I. NAHOUM, D.D.S., *Instructor in Dentistry*
 IRVING J. NAIDORF, D.D.S., *Instructor in Dentistry*
 BERNARD NATHANSON, D.D.S., *Instructor in Dentistry*
 HANS H. NEUMANN, M.D., *Research Assistant in Dentistry*
 BISSELL B. PALMER, D.D.S., *Lecturer in Public Health and Administrative Medicine*
 JOHN D. PIRO, D.D.S., *Instructor in Dentistry*
 THOMAS W. PORTWAY, D.D.S., *Instructor in Dentistry*
 CURT PROSKAUER, D.M.D., *Curator of the Museum, Dental and Oral Surgery*
 ARNOLD ROSENBERG, D.D.S., *Instructor in Dentistry*
 ARNOLD C. ROSENBERG, D.D.S., *Assistant in Dentistry*
 JANICE SCHREIBER, D.D.S., *Assistant in Dentistry*
 STEVEN SCRIVANI, D.D.S., *Instructor in Dentistry*
 JOSEPH SERIO, D.D.S., *Instructor in Dentistry*
 BOAZ SHATTAN, D.D.S., *Instructor in Dentistry*
 HERBERT F. SILVERS, D.D.S., *Research Associate in Dentistry*
 OVID SLAVIN, D.D.S., *Instructor in Dentistry*
 SOLOMON SNYDER, D.D.S., *Assistant in Dentistry*
 ALVIN L. SOLOMON, D.D.S., *Assistant in Dentistry*
 WALTER SPENGEMAN, D.D.S., *Instructor in Dentistry*
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 HARRIET L. STERNBERG, M.S.S., *Lecturer in Dental Hygiene*
 AGATE SUURKIVI, D.D.S., *Assistant in Dentistry*
 JULIUS TARSHIS, D.D.S., *Instructor in Dentistry*
 EUGENE M. TEDALDI, D.D.S., *Instructor in Dentistry*
 EDWARD E. TELTSCH, D.D.S., *Instructor in Dentistry*
 BENJAMIN TENENBAUM, D.D.S., *Research Associate in Dentistry*
 ENNIO L. UCCELLANI, D.D.S., *Instructor in Dentistry*
 BERNARD H. WASSERMAN, D.D.S., *Instructor in Dentistry*

CLINICAL ASSISTANTS

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 Julien W. Anderson, D.D.S.
 Jerome Bartwink, D.M.D.
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 Edmund W. Burke, D.D.S.
 Adeline R. Conti, D.D.S.
 Robert E. Crowley, D.D.S.
 Lawrence Daum, D.D.S.
 Marvin Firdman, D.D.S.
 Allan L. Firestein, D.D.S.
 Richard C. Fowler, D.D.S.
 Saul N. Greenberg, D.D.S.
 William C. Hudson, Jr., D.D.S.
 Milton Jaffe, D.D.S.
 Mortimer Karmioli, D.D.S.
 Gustave Lasoff, D.D.S.

Seymour Levine, D.D.S.
 Richard J. Lowell, D.D.S.
 Louis Mandel, D.D.S.
 George A. Minervini, D.D.S.
 Robert S. Neulist, D.D.S.
 James T. O'Connor, D.D.S.
 Paul Schneider, D.D.S.
 Bert B. Schoeneman, D.D.S.
 Daniel D. Schube, D.D.S.
 Irving S. Silver, D.D.S.
 Jerome M. Sorrel, D.M.D.
 Sam Turof, D.D.S.
 Robert Umans, D.D.S.
 Russell J. Vanacek, D.D.S.
 Robert F. Walsh, D.D.S.
 Issacher Yavelow, D.D.S.
 Seymour Zeff, D.D.S.

PRESBYTERIAN HOSPITAL DENTAL SERVICE

Director: William J. Savoy

Consultants: Adolph Berger, Houghton Holliday, Carl R. Oman, Joseph Schroff, Albin R. Seidel

Attending Dental Surgeons: Solomon N. Rosenstein, Gilbert P. Smith, Edward V Zegarelli

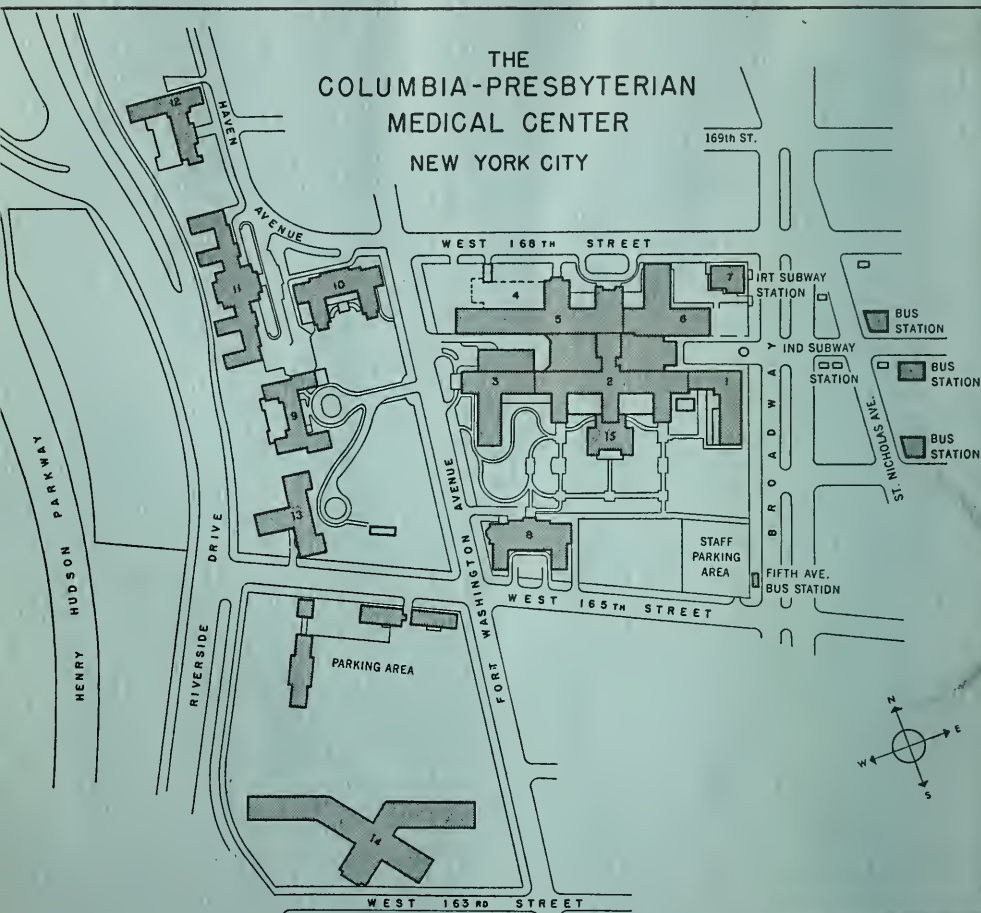
Associate Attending Dental Surgeons: Lester R. Cahn, Irvin L. Hunt, Jr., Alvin S. Nathan

Assistant Attending Dental Surgeons: Frank E. Beube, Sebastian A. Bruno, Jack Budowsky, Edward A. Cain, Kourken Daglian, Robert E. Herlands, John Piro, Laszlo Schwartz, Boaz Shattan

PRESBYTERIAN HOSPITAL ORAL SURGERY SERVICE

Robin M. Rankow, D.D.S., M.D., *Assistant Attending Surgeon*

THE
COLUMBIA-PRESBYTERIAN
MEDICAL CENTER
NEW YORK CITY



1. BABIES HOSPITAL
2. PRESBYTERIAN HOSPITAL
N. Y. ORTHOPAEDIC HOSPITAL
SLOANE HOSPITAL
SQUIER UROLOGICAL CLINIC
3. HARKNESS PAVILION
4. POWER HOUSE
5. COLLEGE OF PHYSICIANS AND SURGEONS
6. VANDERBILT CLINIC
SCHOOL OF DENTAL AND ORAL SURGERY

7. N. Y. CITY DEPT. OF HEALTH
SCHOOL OF PUBLIC HEALTH AND
ADMINISTRATIVE MEDICINE
8. INSTITUTE OF OPHTHALMOLOGY
9. MAXWELL HALL
10. NEUROLOGICAL INSTITUTE
11. N. Y. STATE PSYCHIATRIC INSTITUTE
12. BARD HALL
13. HARKNESS MEMORIAL HALL
14. FRANCIS DELAFIELD HOSPITAL, N.Y.C.
15. PAULINE A. HARTFORD MEMORIAL CHAPEL

COLUMBIA UNIVERSITY BULLETIN

SERIES 59

NUMBER 24

JUNE 13, 1959



School of
Dental
and Oral
Surgery

1959-1960

Academic Calendar, 1959-1960

Sept	8-9	Tuesday-Wednesday. Registration, including payment of fees.*
	14	Monday. Classes begin.
Nov	3	Tuesday. Election Day. Holiday.
	26	Thursday. Thanksgiving Day. Holiday.
	28	Saturday. First trimester ends.
	30	Monday. Second trimester begins.
Dec	21	Monday, through January 3, 1960, Sunday. Christmas Holidays.
Feb	27	Saturday. Second trimester ends.
	29	Monday. Third trimester begins.
Mar	1	Tuesday. Last day for filing application or renewal of application for all degrees and certificates to be awarded in June.†
Apr	11	Monday, through April 17, Sunday. Easter Holidays.
May	21	Saturday. Last day of classes.
	23-27	Monday-Friday. Final examinations.
	30	Monday. Memorial Day. Holiday.

COMMENCEMENT

May	29	Sunday. Baccalaureate Service.
June	1	Wednesday. Award of degrees and certificates.

* Students allowed to register after the period specified must pay a late fee.

† Students who file application after this date must pay a late fee.

Columbia University in the City of New York

School of
Dental and
Oral Surgery

1959-1960

The Faculty of Dental and Oral Surgery

Grayson Kirk, Ph.D., LL.D. *President of the University*

John A. Krout, Ph.D., L.H.D. *Vice-President of the University*

Jacques Barzun, Ph.D. *Dean of Faculties and Provost of the University*

H. Houston Merritt, M.D. *Vice-President in Charge of Medical Affairs*

Gilbert P. Smith, D.D.S. *Dean*

Howard A. Arden, D.D.S. *Associate Professor of Dentistry*

Frank E. Beube, L.D.S., D.D.S. *Clinical Professor of Dentistry*

Edward A. Cain, Jr., D.D.S. *Associate Professor of Dentistry*

Wilfred M. Copenhaver, Ph.D. *Professor of Anatomy*

Joseph A. Cuttita, D.D.S. *Associate Professor of Dentistry*

Nicholas A. Di Salvo, Ph.D., D.D.S. *Professor of Dentistry*

Harry A. Galton, D.D.S. *Clinical Professor of Dentistry*

Magnus I. Gregersen, Ph.D. *Dalton Professor of Physiology*

Robert E. Herlands, D.D.S. *Associate Professor of Dentistry*

John J. Lucca, D.D.S. *Associate Professor of Dentistry*

Carl R. Oman, D.D.S. *Professor of Dentistry*

David Rittenberg, Ph.D. *Professor of Biochemistry*

Harry M. Rose, M.D. *John E. Borne Professor of Medical and Surgical Research*

Solomon N. Rosenstein, D.D.S. *Professor of Dentistry*

William J. Savoy, D.D.S. *Clinical Professor of Dentistry*

Laszlo Schwartz, D.D.S. *Clinical Professor of Dentistry*

Harry P. Smith, M.D. *Delafield Professor of Pathology*

Frances A. Stoll, Ed.D. *Associate Professor of Dental Hygiene*

Harry B. van Dyke, Ph.D., M.D. *Hosack Professor of Pharmacology*

Edward V. Zegarelli, D.D.S. *Edwin S. Robinson Professor of Dentistry*

Program of Study

The Columbia program in dentistry requires four academic years to complete and leads to the degree of Doctor of Dental Surgery. The aim of the curriculum is to enable the student to acquire a knowledge of the fundamental sciences in relation to dentistry and of the techniques of solving dental problems. The first two years are devoted to a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, and physiology, along with the fundamentals of operative and prosthetic dentistry, oral surgery, periodontology, and psychiatry. The student thereby prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skill required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by the division of classes into small sections, by conferences, and by the comprehensive case method of instruction.

The student's voluntary participation in research projects of his own choosing and in programs under the guidance of the faculty is earnestly encouraged. Members of the William Jarvie Society for Dental Research, the undergraduate research and honor society, undertake individual and team projects under the direction of members of the faculty. Lectures on the principles and practice of research are provided for the membership. In addition, students assist in the execution of studies being pursued by faculty members. A limited number of student research fellowships are available for summer work under the direction of the staff. The scope of student research includes critical reviews of the literature, clinical studies in the techniques of the various disciplines of dentistry, and the evaluation of newer therapeutic agents and dental materials. Work in the basic sciences is encouraged.

The administrative offices and the clinical and research facilities of the School of Dental and Oral Surgery occupy three floors of the Vanderbilt Clinic wing of the Columbia-Presbyterian Medical Center, one of the great institutions of its kind in the East.

THE DENTAL CLINIC

The School benefits in many ways by its association with the Medical Center. One of the functions of its clinic is the dental care of patients in the Center's hospitals. Dental students are given a unique opportunity to gain experience in the diag-

nosis and care of those cases where a relationship exists between oral and general systemic diseases. The student also learns at first hand the problems of providing dental care for the hospitalized patient. The wards and outpatient departments of the Center give the closest possible contact and association with all branches of the health services.

THE LIBRARY

The Medical Library occupies parts of the three lower floors in the College of Physicians and Surgeons. It provides current literature, both books and journals, for faculty and students, and it aids in research through its own collection of current and historical works and through its unique bibliographic service.

► POSTGRADUATE TRAINING

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1959–1960 short refresher courses will be offered in various subjects. Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses.

The School is also authorized to grant certificates of training in special branches of dentistry. Study for the certificate of training includes special work in the clinical and basic science branches of dentistry approved by the Dean. At present, a sixteen-month course is offered to qualify graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, and periodontology.

For further information see the bulletin of Postgraduate Courses for Dentists, which may be obtained from the Admissions Office, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University: anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain depart-

ments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the bulletin of the Graduate Faculties, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N.Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Executive Officer, School of Public Health and Administrative Medicine, 600 West 168th Street, New York 32, N.Y.

► COURSES FOR DENTAL HYGIENISTS

Columbia offers two programs of study in dental hygiene. The program for the Bachelor of Science degree includes a minor in public health; it also offers the subjects required by New York State for a permanent dental hygiene teacher's license. The purpose of the program is to give students the wide range of professional experience available in a large medical center, to perfect dental health techniques, and to provide these educational experiences in an ethical environment. Advanced education leading to the Master of Science degree is provided for those who wish to teach dental hygiene or to fill administrative or supervisory posts in other university schools for dental hygienists.

Columbia was the first university in the United States to offer a program in dental hygiene. From 1918 to 1959, 1,470 women have been graduated from the Courses for Dental Hygienists. Students have enrolled from all states and territories of the United States, as well as from Canada, Germany, Norway, and Sweden.

For a special bulletin describing the programs of study address the Director, Courses for Dental Hygienists, 630 West 168th Street, New York 32, N.Y.

Courses of Instruction

The University reserves the right to withdraw or modify the courses of instruction or to change the instructors at any time.

ANATOMY

Anatomy 101. Oral anatomy

Professor Arden and staff. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Anatomy 115. Oral microscopic anatomy and embryology

Professor Applebaum and staff. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150. Microscopic anatomy

Professor Copenhaver and staff. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as *Anatomy 101F* in the Medical School.

Anatomy 151. Gross anatomy

Professor Rogers and staff. Freshman year.

Lectures, conferences, and laboratory.

Anatomy 152. Statistics, genetics, embryology

Professor Copenhaver and staff. Freshman year.

Lectures and demonstrations correlating statistics, genetics, embryology, and adaptations at birth as they relate to principles of human development.

Anatomy 153. Neuroanatomy

Professors Carpenter and Noback, and assistants. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to *Anatomy 106S* in the Medical School.

Anatomy 252. Functional anatomy of the head and neck

Professors Moss and Rankow. Junior year.

A concise review of the functional interrelationships in this region and their dynamic significance. Pertinent clinical topics are analyzed from this viewpoint.

BIOCHEMISTRY

Biochemistry 150. Principles of biochemistry

Professor Eisenberg. Freshman year.

A study of the chemical constitution of natural products and their metabolism to yield cellular constituents and the energy requirements of the mammalian cell.

MEDICINE**Medicine 278. General survey of medicine**

Professor Rankow and members of the Presbyterian Hospital staff. Junior year.
The cardinal manifestations of disease are reviewed from the differential diagnostic point of view. The disorders of the various organ systems as well as those resulting from endocrine and metabolic dysfunction are studied. The lectures and conferences are supplemented with clinics in which patients are presented to illustrate the fundamental manifestations of systemic conditions and their significance.

MICROBIOLOGY**Microbiology 151. General medical microbiology and immunology**

Dr. Ellison. Sophomore year.
Lectures, conferences, and laboratory.

Microbiology 152. Principles of microbiology, immunology, and epidemiology

Professor Ellison. Sophomore year.
This course is similar to *Microbiology 105F* in the Medical School. Lectures on oral microbiology are substituted for several of those of the medical series.

ORTHODONTICS**Orthodontics 241. Principles of orthodontics**

Professor Di Salvo and staff. Junior year.
Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and construction of fixed and removable appliances used as space maintainers. In addition, simple appliances used in tooth guidance procedures, which are considered to be within the province of the general practitioners of dentistry, are constructed.

Orthodontics 242. Orthodontic clinic

Professor Di Salvo and staff. Senior year.
Students obtain clinical experience in the use of appliances constructed in the laboratory. They treat patients with orthodontic problems which require either preventive measures or minor tooth movement.

PATHOLOGY**Pathology 150. General and special pathology**

Professor H. P. Smith and staff. Sophomore year.
Lectures, demonstrations, and laboratory work designed to give the student a comprehensive understanding of the mechanisms of disease. Special emphasis is placed on general pathology and on disorders of the respiratory, cardiovascular, and osseous systems.

Pathology 246. Oral pathology

Professor Cahn and staff. Junior year.
Lectures, demonstrations, conferences, and laboratory work on diseases of the jaws, teeth, and soft tissues about the oral cavity.

Pathology 247. Oral pathology seminar

Professor Cahn. Senior year. Elective.
Conferences on the clinical application of oral pathology.

PEDODONTICS**Pedodontics 202. Pedodontics lectures and clinic**

Professor Rosenstein and staff. Senior year.

Lectures, conferences, and clinical practice relating to operative dental procedures for children, management of child dental patients, and application of present knowledge of dental development and preventive dentistry.

PERIODONTOLOGY

Periodontology 151. Periodontia lectures, seminars, and clinic

Professor Beube and staff. Sophomore year.

Lectures and seminars in the diagnosis, etiology and treatment of periodontal diseases. Clinical practice in periodontal examination, prescribing dental prophylaxis, subgingival curettage, and oral hygiene.

Periodontology 251. Periodontia lectures, seminars, and clinic

Professor Beube and staff. Junior year.

Lectures and seminars on periodontal surgery, occlusal traumatism, selective tooth grinding, and temporary splinting. Clinical practice in subgingival curettage, selective tooth grinding, wire ligation, and standard periodontal surgical techniques.

Periodontology 252. Periodontia lectures and seminars

Professor Beube and staff. Senior year.

Lectures and seminars on the history of treatment methods, special problems in periodontal surgery, fixed splinting, periodontal histology and histopathology, and treatment-planning.

Periodontology 253. Periodontia clinic

Professor Beube and staff. Senior year.

Continuation of *Periodontology 251* and advanced periodontal surgical techniques.

PHARMACOLOGY

Pharmacology 150. Introduction to pharmacology

The staff. Junior year.

Not given in 1959-1960.

Lectures, conferences, and laboratory. By means of the lectures in this course, the student is introduced to a wide variety of drugs. The effects of many of these drugs on man and lower animals are demonstrated in the laboratory. Emphasis is placed upon general pharmacological principles to assist the student in the rational use of drugs and in the evaluation of new remedies as they may be introduced.

PHYSIOLOGY

Physiology 150. Mammalian physiology

Professor Root and staff. Sophomore year.

Lectures, conferences, demonstrations, and laboratory. The function of the various organ systems of the mammalian body and their interrelations are studied.

PSYCHIATRY

Psychiatry 150. Psychiatry for the dentist

Professor Cattell. Sophomore year.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH

Public Health 222. Principles of public health

Professor Bushel and staff. Senior year.

Survey course in the theory and practice of general public health with more detailed discussion of dental public health topics. Included are several background sessions on epidemiology, preventive medicine, and statistics as well as presentations of public health programs at the federal, state, and local levels. Dental public health sessions feature existing programs, dental prepayment, community dental surveys, the dentist and his professional society, and dental health education resources.

RESTORATIVE DENTISTRY

Dental Materials 125 and 126. Physical properties of dental materials

Professor Ayers. Freshman and sophomore years.

Lectures and laboratory on the physical and chemical properties of the metals and other materials used in dentistry, with clinical applications.

Operative Dentistry 130 and 131. Elements of operative dentistry

Professor Cain and staff. Freshman and sophomore years.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233. Operative clinical practice

Professor Sherman and staff. Junior year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234. Advanced clinical practice

Professor Oman and staff. Senior year.

A continuation in lectures and clinic of *Operative Dentistry 233* with the consideration of special problems in operative practice, including endodontia.

Prosthetics 104 and 105. Crown and bridge lectures and technique

Professor Arden and staff. Freshman and sophomore years.

Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.

Prosthetics 157. Prosthetic lectures and technique

Professor Arden and staff. Sophomore year.

Lectures and technical procedures in full and removable partial denture construction.

Prosthetics 205. Crown and bridge lectures and technique

Professor Herlands. Junior year.

Lectures on the clinical procedures in crown and bridgework.

Prosthetics 206. Crown and bridge clinic

Professor Herlands and staff. Junior year.

Clinical construction of elementary crown and bridgework.

Prosthetics 210. Crown and bridge lectures

Professor Herlands. Senior year.

Lectures and conferences on various types of bridgework.

Prosthetics 211. Crown and bridge clinic

Professor G. P. Smith and staff. Senior year.

Clinical construction of crown and bridgework.

Prosthetics 212. Applied occlusal dynamics

Professor Cohn. Junior year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260. Prosthetic lectures

Professors Lucca and Hindels. Junior year.

Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.

Prosthetics 261 and 263. Prosthetic clinic

Professors Lucca and G. P. Smith and staff. Junior and senior years.

Clinical construction of full and partial dentures.

Prosthetics 264. Prosthetic lectures

Professor Lucca. Senior year.

A series of lectures on clinical consideration in prosthodontic diagnosis, design, and construction.

Prosthetics 265. Surgical prosthesis

Professor Bruno. Senior year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

STOMATOLOGY

Diagnosis 212. Diagnosis lectures and clinic

Professors Zegarelli and Cuttita and staff. Junior year.

Lectures on methods of diagnosis, pulp symptomatology, radiographic interpretation, anomalies, and diseases of the mouth and jaws; clinical practice in diagnostic examination and history-taking.

Diagnosis 213. Diagnosis clinic

Diagnosis staff. Senior year.

Clinical practice in diagnostic procedures and techniques, comprehensive diagnosis including treatment planning, and clinical and laboratory diagnosis of diseases of the mouth and jaws.

Diagnosis 214. Diagnosis seminar

Professor Zegarelli. Senior year.

Lectures and discussions on the diseases of the maxilla and mandible and tumors of the mouth; demonstrations of diagnostic techniques.

Diagnosis 215. Diagnosis seminar

Professor Zegarelli and staff. Senior year.

Lectures and discussions on focal infection, psychosomatics in dentistry, and hemorrhagic diseases of the mouth.

Radiology 267. Radiology lectures and clinic

Professor Budowsky and staff. Junior year.

Lectures and discussions on history, physics, and electronics of radiology; studies on radiobiology, radiotherapy, radiation hazards, and protections; clinical practice in intra- and extraoral radiography; demonstrations of temporomandibular joint and laminography techniques.

Therapeutics 286.

Professor Kutscher. Junior year.

Lectures and conferences dealing with the application of pharmacologic principles to clinical practice; indications for therapy, choice of drugs, modes of administration, side reactions, and contraindications are emphasized.

SURGERY

Surgery 168. Principles of surgery

Professor Rankow. Sophomore year.

Lectures, seminars, and basic principles of general surgery.

Surgery 270A. Oral surgery

Professor Rothenberg. Sophomore year.

Lectures and seminars on local anesthesia and history of anesthesia; chemistry of various local anesthetic agents; indications for use; infiltration and block techniques described. Basic principles of instrumentation for removal of teeth.

Surgery 270B. Oral surgery

Professor Savoy and staff. Junior year.

Demonstrations, lectures, and clinical practice in local anesthesia and the removal of teeth; lectures on surgical flaps; preparation of the mouth for prosthesis; exodontia technique.

Surgery 272. Oral surgery

Professor Savoy and staff. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia. Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274. Oral surgery seminar

Professors Savoy, Rankow, and staff. Senior year. Required.

Seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation of malignancies associated with the oral cavity and facial regions. Preoperative and postoperative case presentations of maxillofacial malignancies.

THEORY AND PRACTICE OF DENTISTRY**Theory and Practice 280. Dental ethics, jurisprudence, and practice administration**

Professor Hunt. Junior year.

Lectures covering opportunities in the field of dentistry, selecting a location, planning and equipping an office; development of habits leading to personal health and professional success. Introduction to dental ethics and the law relating to dental practice. Handling patients under clinic conditions, and dental records.

Theory and Practice 281. Dental ethics, jurisprudence, and practice administration

Professor Hunt. Senior year.

Lectures and seminars covering the codes of ethics, intraprofessional relations, areas of legal liability, malpractice, contracts, establishing fees, office procedures, psychology of handling patients and practice building.

Theory and Practice 283. Clinical oral physiology

Professor Schwartz and staff. Senior year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and conferences.

Theory and Practice 285. Comprehensive case

The staff. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of x-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 287. History of dentistry

Professor Schwartz. Freshman year.

This course orients the student to the whole of dentistry through the study of its history. The origins, growth, and trends in the development of the scientific and technical principles of modern dentistry are considered in lectures and conferences. The technique of utilizing the literature of dentistry is described.

Summary of the Program

The letters following the course numbers indicate the trimester in which the course is given: F, first; S, second; T, third.

► FIRST YEAR

	<i>Hours</i>		
	<i>Class</i>	<i>Lab/Clin</i>	<i>Total</i>
Anatomy 101S		154	154
Anatomy 115T	24	48	72
Anatomy 150FS	42	126	168
Anatomy 151FS	50	220	270
Anatomy 152 FST	53		53
Anatomy 153S	16	32	48
Biochemistry 150ST	38	114	152
Dental Materials 125S		33	33
Operative Dentistry 130ST		106	106
Prosthetics 104T		92	92
Theory and Practice 287T	12		12
TOTAL			1,160

► SECOND YEAR

Dental Materials 126T		33	33
Microbiology 151F and 152F	33	99	132
Operative Dentistry 131FST	22	198	220
Pathology 150ST	54	144	198
Periodontology 151ST	24	42	66
Physiology 150FS	56	153	209
Prosthetics 105F		99	99
Prosthetics 157ST		187	187
Psychiatry 150S	11		11
Surgery 168S	11		11
Surgery 270AT	11		11
TOTAL			1,177

► THIRD YEAR

► THIRD YEAR	Hours		
	Class	Lab/Clin	Total
Anatomy 252T	11		11
Diagnosis 212FST	33	50	83
Medicine 278T	22	22	44
Operative Dentistry 233FST	33	121	154
Orthodontics 241F	22	49	71
Pathology 246F	22	44	66
Periodontology 251S	11	30	41
Pharmacology 150FS	55	33	88
Prosthetics 205F		60	60
Prosthetics 206ST	11	94	105
Prosthetics 212T	30		30
Prosthetics 260FT and 261FST	22	153	175
Radiology 267FS	11	14	25
Surgery 270BFST	11	16	27
Theory and Practice 280T	11		11
Therapeutics 286S	11		11
TOTAL			1,002

► FOURTH YEAR

Diagnosis 213FS		50	50
Diagnosis 214F		22	22
Diagnosis 215T	11		11
Operative Dentistry 234FST	22	322	344
Orthodontics 242FST		15	15
Pedodontics 202FST	22	91	113
Periodontology 252FS and 253F	22	30	52
Prosthetics 210S and 211FST	11	135	146
Prosthetics 263FST and 264T	11	164	175
Prosthetics 265T	11	19	30
Public Health 222ST	22		22
Surgery 272FST	44	30	74
Surgery 274F	11		11
Theory and Practice 281FT	22		22
Theory and Practice 283T	11		11
Theory and Practice 285T			
TOTAL			1,098

Admission, Registration and Expenses

Candidates should apply during the academic year preceding that for which they seek admission, on application blanks obtained from the Committee on Admissions, School of Dental and Oral Surgery, 630 West 168th Street, New York 27, N.Y. Every application must be accompanied by a check or money order for \$10, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable and is not credited toward tuition.

The State Department of Education has special requirements with which students who are not citizens of the country must comply. Foreign students who wish to apply should communicate with the Dean.

Required preparation: three full years at an acceptable college of arts and sciences, including the following courses required by the State Board of Regents (6 points of each). English composition and literature, physics, biology, inorganic chemistry, and organic chemistry.

Recommended preparation: additional courses in quantitative, qualitative, physical, and organic chemistry; physics; comparative anatomy. Advanced courses in biology. Courses in mathematics, German and French, sociology, history, and the fine and industrial arts.

It is not necessary to complete the academic requirements before applying, but all requirements must be completed before matriculation. The admission of a student depends primarily on his preparation and intellectual capacity, but it also depends upon judgments of his character and health.

DENTAL APTITUDE TESTS

All applicants must take the Dental Aptitude Tests, which are conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

ACCEPTANCE FEE

Within one month after he receives notice of his acceptance, an applicant must notify the Committee on Admissions that he intends to enroll and must send a check or money order for \$50 made payable to Columbia University. If he registers for the term to which he has been admitted, the fee will be credited toward his tuition; if he does not register, the fee will not be refunded.

COMBINED COURSES

With Barnard College. Under the "professional option" plan, students from Barnard College may receive the Bachelor of Arts degree from Barnard after the completion of three years of undergraduate work and the first year in the School of Dental and Oral Surgery. To be eligible for this privilege, before entering the School the student must have completed at Barnard 90 points of academic work (including all specific requirements), a major of 28 points, and the major examination or thesis.

With the School of General Studies. Students from the School of General Studies may exercise the professional option after the completion of 94 points (including all courses prescribed for the Bachelor of Science degree), not less than 64 of which must have been taken at Columbia University.

In medicine and dentistry. It is usually possible for a graduate of a registered medical school who holds the degree of Doctor of Medicine to meet the requirements of the School and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one summer session.

► REGISTRATION

Before attending classes, students must register in person at the Office of the Registrar on September 8-9, 1959. Registration consists of filling out forms required for University records and paying the fees. Late registration requires the approval of the Dean of the School and the payment of a late fee (see below).

REGULATIONS

Each person whose registration has been completed will be considered a student of the University during the term for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is first registered.

The privileges of the University are not available to any student until he has completed his registration. Since, under the University statutes, payment of fees is part of registration, no student's registration is complete until his fees have been paid. No student is permitted to attend any University course for which he is not officially registered unless he has been granted auditing privileges. No student may register after the stated period unless he obtains the written consent of the proper dean or director.

ATTENDANCE AND LENGTH OF RESIDENCE

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work.

Students are held accountable for absences incurred owing to late enrollment. Any student whose religious duties conflict at any time with academic requirements should apply to his dean or director for an equitable solution.

A student in good standing may, for reasons of weight, be granted a leave of absence by the dean or director of the division of the University in which he is registered.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems proper. The disciplinary authority of the University is vested in the President and, subject to his reserved powers, in the dean of each faculty and the director of the work of each administrative board.

► FEES

Tuition fees, the University fee, the student health service fee, and laboratory deposits are payable each term in advance and as part of registration. If these fees are paid after the last day of registration (see the Academic Calendar), they will not be reduced, and a late fee of \$6.00 will be imposed.

The following fees are prescribed by statute for the full program for one year for a candidate for the D.D.S. degree and are subject to change at any time at the discretion of the Trustees. Fees for a partial program are assessed by the Registrar as provided by the University statutes.

University fee	\$ 48.00
Tuition fee	1,100.00
Student health service fee	30.00
For all full-time students, per academic year (see below)	
Instrument case rental	5.00

APPLICATION FEES AND LATE FEES

Application for admission	\$10.00
Application for each special examination	10.00
For renewal of application for a degree	1.00
For late registration	6.00
For late application for a special examination	5.00
For late application, or late renewal of application, for a degree	5.00

FEES FOR REPEATED COURSES

A student required to repeat the work for any one year must pay the full tuition fee.

WITHDRAWAL AND ADJUSTMENT OF FEES

A student who decides to withdraw from the University must notify the Registrar in writing at once. If he is under twenty-one years of age, his parent or guardian must first give consent in writing to the Registrar. He will be given an honorable discharge provided he is in good academic standing and not subject to discipline. At the Registrar's discretion and according to University policy, he will also be given a proportionate rebate of the tuition fees that he has paid. The rebate will be reckoned from the day on which the Registrar receives the student's written notification of withdrawal. The University fee, the student health service fee, application fees, and late fees are not refundable.

STUDENT HEALTH SERVICE FEE

The student health service fee will be used to pay the annual premium of the Associated Hospital Service of New York for hospital insurance and to pay part of the cost of the Student Health Service. Students who already have hospital insurance will not be charged the cost of the premium.

Daily office hours are held by the Student Health Service, Room 2-220, Vanderbilt Clinic. Members of the health service are available to attend ill students if they live near the Medical Center. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under the terms of an insurance policy of the Associated Hospital Service of New York.

RENEWAL OF APPLICATION FOR A DEGREE

An application for a degree (except doctoral degrees) terminates at the next regular time for the issuance of diplomas subsequent to the date of filing, but it may be renewed for a fee of \$1.00 each time that the candidate chooses to come up for consideration.

► ESTIMATED EXPENSES

The approximate cost of attending the School for an academic year of nine months is as follows:

	<i>Average</i>	<i>Minimum</i>
Tuition and fees for a full program	\$1,183	\$1,183
Room in one of the dormitories	400	250
Board in a University dining hall	550	510

In addition each student should budget for such items as clothing, laundry and dry cleaning, travel, dues to organizations, amusements, and sundries. Those who live at home probably spend from \$100 to \$150 for lunches during the year.

BOOKS AND EQUIPMENT

Books. The approximate cost of books will be: in the freshman year, \$200; in the sophomore year, \$100; in the junior year, \$135; in the senior year, \$30. Books may be purchased from the Medical Center Bookstore on the second floor of the

College of Physicians and Surgeons. The store is maintained expressly for the convenience of the students and staff of the Medical Center schools and hospitals.

Instruments and supplies. Each student must buy, from the University, the original package outfit of instruments specified in the official instrument list. Unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. Students may not buy more than is required to complete a case. The approximate cost of instruments is: in the freshman year, \$1,200; in the sophomore year, \$450; in the junior year, \$325; in the senior year, \$95. Instruments must be paid for at the beginning of the academic year, but students who can demonstrate their need may borrow from the University or from the National Defense Student Loan Program to defray the cost.

Microscopes. Each entering student must purchase a satisfactory microscope of standard make, fitted with the following attachments: (a) triple nosepiece; (b) Abbe or variable focus condenser; (c) 10x and 6x oculars; (d) 16 mm. and 4 mm. objectives; (e) oil immersion lens.

Lockers. Each entering student is assigned a locker; he must use a combination lock as prescribed by the School.

► FINANCIAL AID

Students may apply for scholarships and grants through the Dean's Office. New students should file application along with the application for admission. Scholarships are awarded to able students who demonstrate their need. Grants are awarded only in combination with loans; any student who can demonstrate his need is eligible to apply. Application forms are issued by the Dean's Office.

Long-term loans at low interest rates are available from the University for tuition and fees, and under certain circumstances, for living expenses. Students who are United States citizens and residents of states having loan plans (Maine, Massachusetts, New York, and Vermont) are urged to apply to these sources. Federal loan funds are also available. Up to one month before the beginning of the academic year, dental students, along with other students who are concentrating in science, are given special consideration for National Defense Student Loans. Information on any of these loan plans may be obtained from the Office of Financial Aid, 322 University Hall. To insure an early decision, applications should be filed for the autumn term by September 1; for the spring term by December 1.

Deferred payment of tuition may be arranged through the Marine Midland Time Plan. A brochure describing the details of the Plan is issued by the Dean's Office.

The heavy schedule of the School makes it difficult for students to undertake outside part-time work during the academic year. If at all possible, other financial arrangements should be made.

► HOUSING

Booklets describing the University residence halls and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125

Livingston Hall, Columbia University, New York 27, N.Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. Rates for the academic year are \$250 to \$470 for men and \$285 to \$525 for women. Optional pre-paid board plans are available in the men's residence halls. In Johnson Hall, the residents are required to take breakfast and dinner there at a cost of \$375 for the academic year.

Students who wish to live off campus should write or call at the Registry of Off-Campus Accommodations, 115 Livingston Hall, Columbia University, New York 27, for an information sheet which describes the services rendered by the Registry.

International House, a privately owned student residence near the campus, has accommodations for about five hundred students, both foreign and American. Rates for the academic year are \$350 to \$700. To be eligible for admission a student must be at least twenty-one years old and must be registered for a minimum of twelve points or for a program of full-time research. Address the Committee on Admissions, International House, 500 Riverside Drive, New York 27.

University apartments for married graduate students, at 431 Riverside Drive, will be available for occupancy on or about September 1, 1959. These are one-bedroom, furnished apartments, and it is expected that rates will range from \$125 to \$170 per month including utilities. Requests for information and application forms should be sent to the Residence Halls Office, 125 Livingston Hall.

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates to relatives and guests of members of the University community.

► LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N.Y. All applications for admission to the examination should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

► STUDENT ORGANIZATIONS

OMICRON KAPPA UPSILON

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity, was chartered in the School of Dental and Oral Surgery in 1934. The purpose of the fraternity is to recognize and honor a maximum of 12 per cent of the members of the graduating senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

THE WILLIAM JARVIE SOCIETY

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and for which sophomores, juniors, and seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

► REGULATIONS

GRADING SYSTEM

The following grading system is used: A, excellent; B, good; C, fair; D, poor but passing; F, failure.

REQUIREMENTS FOR PROMOTION

A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the officers of instruction under whom he has studied during the preceding year.

The School reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions of study in the School.

Students are classified for readmission or promotion under the following categories: (1) recommended for advancement; (2) recommended for readmission to the same class; (3) recommended neither for advancement nor for readmission to the same class.

GRADUATION

The degree of Doctor of Dental Surgery will be awarded upon completion of the prescribed curriculum. Diplomas are issued at the times stated in the Academic Calendar.

Officers of Instruction

ANATOMY

- Edmund Applebaum. *Associate Professor of Dental Anatomy*
D.D.S., New York College of Dentistry, 1922
- Wilfred M. Copenhaver. *Professor of Anatomy*
A.B., Western Maryland, 1921; Ph.D., Yale, 1925
- Dorothy D. Johnson. *Assistant Professor of Anatomy*
A.B., Bates, 1941; M.A., Vassar, 1943; Ph.D., Columbia, 1949
- Melvin L. Moss. *Assistant Professor of Anatomy*
A.B., New York University, 1942; D.D.S., Columbia, 1946; Ph.D., 1954
- Charles R. Noback. *Associate Professor of Anatomy*
B.S., Cornell, 1936; M.S., New York University, 1938; Ph.D., Minnesota, 1942
- William M. Rogers. *Assistant Professor of Anatomy*
B.S., Georgia, 1921; Ph.D., Cornell, 1927
- S. C. Shen. *Assistant Professor of Anatomy*
B.S., Yenching University, 1933; Ph.D., Cambridge, England, 1939
- George K. Smelser. *Professor of Anatomy*
A.B., Earlham, 1929; Ph.D., Chicago, 1932

BIOCHEMISTRY

- Max A. Eisenberg. *Assistant Professor of Biochemistry*
A.B., Brooklyn, 1938; M.S., New York University, 1941; Ph.D., Duke, 1950
- Maxwell Karshan. *Associate Professor of Biochemistry*
B.S., College of the City of New York, 1917; M.A., Columbia, 1920; Ph.D., 1925
- David Rittenberg. *Professor of Biochemistry*
B.S., College of the City of New York, 1929; Ph.D., Columbia, 1934

MICROBIOLOGY

- Sam M. Beiser. *Associate Professor of Microbiology*
Ph.D., Columbia, 1951
- Solon A. Ellison. *Assistant Professor of Microbiology*
B.S., College of the City of New York, 1942; D.D.S., Columbia, 1946; Ph.D., 1958
- Bernard F. Erlanger. *Associate Professor of Microbiology*
A.B., College of the City of New York, 1943; M.A., New York University, 1949; Ph.D., Columbia, 1951
- Gabriel C. Godman. *Associate Professor of Microbiology*
A.B., New York University, 1941; M.D., 1944
- Calderon Howe. *Associate Professor of Microbiology*
A.B., Yale, 1938; M.D., Harvard, 1942

Elvin A. Kabat. *Professor of Microbiology*

B.S., College of the City of New York, 1932; M.A., Columbia, 1934; Ph.D., 1937

Alice W. Knox. *Assistant Professor of Microbiology*

A.B., Vassar, 1927; Ph.D., Columbia, 1951

Councilman Morgan. *Associate Professor of Microbiology*

B.S., Harvard, 1943; M.D., Columbia, 1946

Harry M. Rose. *John E. Borne Professor of Medical and Surgical Research*

A.B., Yale, 1928; M.D., Cornell, 1932

Beatrice C. Seegal. *Professor of Microbiology*

A.B., California, 1918; M.A., 1921; M.D., Johns Hopkins, 1924

Stuart W. Tanenbaum. *Associate Professor of Microbiology*

B.S., College of the City of New York, 1944; Ph.D., Columbia, 1951

ORAL SURGERY

Theodore M. Bundrant. *Associate Clinical Professor of Dentistry*

D.D.S., Howard, 1929

Kourken A. Daglian. *Assistant Clinical Professor of Dentistry*

B.S., College of the City of New York, 1941; D.D.S., Columbia, 1943

Morris Fierstein. *Associate Clinical Professor of Dentistry*

D.D.S., Columbia, 1921

Morris Kavelle. *Assistant Clinical Professor of Dentistry*

B.S., New York University, 1929; D.D.S., Columbia, 1933

Bertram Klatskin. *Assistant Clinical Professor of Dentistry*

A.B., Cornell, 1937; D.D.S., Columbia, 1941

Alvin S. Nathan. *Clinical Professor of Dentistry*

D.D.S., Columbia, 1926; B.S., New York University, 1935; M.A., 1938

Robin M. Rankow. *Assistant Clinical Professor of Oral Surgery*

D.D.S., Columbia, 1940; M.D., Rochester, 1950

Fred Rothenberg. *Assistant Clinical Professor of Dentistry*

D.M.D., Goettingen, Germany, 1935; D.D.S., Pennsylvania, 1937

William J. Savoy. *Clinical Professor of Dentistry*

B.S., Manhattan, 1931; D.D.S., Columbia, 1935

David Tanchester. *Clinical Professor of Dentistry (at Montefiore Hospital)*

D.D.S., New York University, 1921

ORTHODONTICS

Nicholas A. Di Salvo. *Professor of Dentistry*

B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1952

Harry A. Galton. *Clinical Professor of Dentistry*

D.D.S., Columbia, 1932

Francis J. Loughlin. *Assistant Clinical Professor of Dentistry*

D.D.S., New York University, 1939

Henry I. Nahoum. *Assistant Clinical Professor of Dentistry*

A.B., Brooklyn, 1940; D.D.S., Columbia, 1943

- Armand Oppenheimer. *Assistant Clinical Professor of Dentistry*
A.B., College of the City of New York, 1926; B.S., Columbia, 1927; D.D.S., 1929
- Laszlo Schwartz. *Clinical Professor of Dentistry*
B.S., College of the City of New York, 1927; D.D.S., Columbia, 1931
- Julius Tarshis. *Assistant Clinical Professor of Dentistry*
D.D.S., Pennsylvania, 1949
- Clifford L. Whitman. *Associate Clinical Professor of Dentistry*
D.D.S., Maryland, 1927

PATHOLOGY

- Lester R. Cahn. *Associate Professor of Oral Pathology*
D.D.S., New York College of Dentistry, 1918
- Fred V. Lucas. *Associate Professor of Pathology*
A.B., California, 1942; M.D., Rochester, 1950
- Harry P. Smith. *Delafield Professor of Pathology*
A.B., California, 1916; M.S., 1918; M.D., 1921
- Wellington B. Stewart. *Associate Professor of Pathology*
B.S., Notre Dame, 1942; M.D., Rochester, 1945
- George P. Vennart. *Assistant Professor of Pathology*
A.B., Wesleyan, 1948; M.D., Rochester, 1953

PEDODONTICS

- Jerry A. Adelson. *Assistant Clinical Professor of Dentistry*
A.B., Pennsylvania, 1944; D.D.S., New York University, 1951
- Solomon N. Rosenstein. *Professor of Dentistry*
B.S., College of the City of New York, 1929; D.D.S., Columbia, 1930
- Julian Schroff. *Assistant Clinical Professor of Dentistry*
B.S., College of the City of New York, 1930; D.D.S., Columbia, 1934
- William A. Verlin. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1931

PHARMACOLOGY

- Herbert J. Bertelstone. *Assistant Professor of Pharmacology*
B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945
- Frederick G. Hofmann. *Assistant Professor of Pharmacology*
A.B., Michigan, 1943; Ph.D., Harvard, 1952
- Wilbur H. Sawyer. *Associate Professor of Pharmacology*
M.D., Harvard, 1945; Ph.D., 1950
- Harry B. van Dyke. *Hosack Professor of Pharmacology*
B.S., Chicago, 1918; Ph.D., 1921; M.D., Rush, 1923
- Shih-Chun Wang. *Professor of Pharmacology*
B.S., Yenching, 1931; M.D., Peiping Union Medical College, 1935; Ph.D., Northwestern, 1940

PHYSIOLOGY

Shu Chien. *Assistant Professor of Physiology*

M.B., National Taiwan, 1954; Ph.D., Columbia, 1957

Magnus I. Gregersen. *Dalton Professor of Physiology*

A.B., Stanford, 1923; M.A., 1924; Ph.D., Harvard, 1930

Werner R. Loewenstein. *Assistant Professor of Physiology*

B.A., Chile, 1945; D.M.D., Chile, 1950

William L. Nastuk. *Associate Professor of Physiology*

B.S., Rutgers, 1939; Ph.D., 1945

Walter S. Root. *Professor of Physiology*

B.S., Wesleyan, 1924; Ph.D., Pennsylvania, 1930

William W. Walcott. *Associate Professor of Physiology*

A.B., Yale, 1933; Ph.D., Columbia, 1944

PSYCHIATRY

James P. Cattell. *Assistant Clinical Professor of Psychiatry*

A.B., Miami, 1938; M.D., Harvard, 1942

Lawrence C. Kolb. *Professor of Psychiatry*

M.D., Johns Hopkins, 1934

PUBLIC HEALTH

Margaret W. Barnard. *Associate Professor of Public Health Practice*

A.B., Smith, 1917; M.D., Cornell, 1923; D.P.H., Johns Hopkins, 1935

Arthur Bushel. *Adjunct Associate Professor of Dental Public Health Practice*

A.B., Brooklyn, 1940; D.D.S., Columbia, 1943; M.P.H., 1947

John W. Fertig. *Professor of Biostatistics*

A.B., Ursinus, 1931; Ph.D., Minnesota, 1935

Leonard J. Goldwater. *Professor of Occupational Medicine*

A.B., Michigan, 1924; M.D., New York University, 1928; Med.Sc.D., 1937; M.S., Columbia, 1941

Alvin R. Jacobson. *Associate Professor of Sanitary Sciences*

B.S., North Dakota, 1935; M.S., 1937; Ph.D., Iowa, 1941

George Rosen. *Professor of Public Health Education*

B.S., College of the City of New York, 1930; M.D., Berlin, 1935; Ph.D., Columbia, 1944; M.P.H., 1947

Ray E. Trussell. *Joseph R. De Lamar Professor of Administrative Medicine; Associate Dean (Public Health)*

A.B., Iowa, 1936; M.D., 1941; M.P.H., Johns Hopkins, 1947

RESTORATIVE DENTISTRY

Howard A. Arden. *Associate Professor of Dentistry*

B.S., Fordham, 1943; D.D.S., Columbia, 1946

Herbert D. Ayers, Jr. *Associate Clinical Professor of Dentistry*

A.B., Columbia, 1929; D.D.S., 1931

- Sebastian A. Bruno. *Assistant Clinical Professor of Dentistry*
D.M.D., Tufts, 1948
- Stanislaw H. Brzustowicz. *Assistant Clinical Professor of Dentistry*
B.S., St. John's, 1940; D.D.S., Columbia, 1943
- Edward A. Cain, Jr. *Associate Professor of Dentistry*
B.S., Fordham, 1942; D.D.S., Columbia, 1945
- Louis A. Cohn. *Associate Clinical Professor of Dentistry*
D.D.S., Pennsylvania, 1928
- Joseph C. De Lisi. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1952
- Joseph E. Fiasconaro. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1943
- Herbert P. Fritz. *Assistant Clinical Professor of Dentistry*
B.S., New York University, 1933; D.D.S., Columbia, 1936
- Robert E. Herlands. *Associate Professor of Dentistry*
A.B., Columbia, 1941; D.D.S., 1944
- George W. Hindels. *Associate Clinical Professor of Dentistry*
M.D., Vienna, 1938; D.D.S., Columbia, 1943
- Irvin L. Hunt, Jr. *Associate Professor of Dentistry*
D.D.S., Pennsylvania, 1929
- Joseph M. Leavitt. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1940
- George F. Lindig. *Associate Clinical Professor of Dentistry*
D.D.S., Minnesota, 1924
- John J. Lucca. *Associate Professor of Dentistry*
A.B., New York University, 1941; D.D.S., Columbia, 1947
- William Miller. *Assistant Clinical Professor of Dentistry*
B.S., Columbia, 1927; D.D.S., 1931
- William J. Miller. *Associate Clinical Professor of Dentistry*
A.B., New York University, 1940; D.D.S., Columbia, 1943
- Irving J. Naidorf. *Assistant Clinical Professor of Dentistry*
B.A., New York University, 1937; D.D.S., Columbia, 1941
- Carl R. Oman. *Professor of Dentistry*
D.D.S., Minnesota, 1914
- Max A. Pleasure. *Associate Clinical Professor of Dentistry*
D.D.S., Pennsylvania, 1928; M.S., Columbia, 1941
- George Schwendener. *Assistant Professor of Dentistry*
D.D.S., Columbia, 1935
- Harold Sherman. *Assistant Clinical Professor of Dentistry*
B.S., College of the City of New York, 1935; D.D.S., Michigan, 1946
- William H. Silverstein. *Associate Clinical Professor of Dentistry*
D.D.S., Maryland, 1937
- Gilbert P. Smith. *Professor of Dentistry; Dean*
D.D.S., Minnesota, 1927
- Ennio L. Uccellani. *Assistant Professor of Dentistry*
B.S., College of the City of New York, 1946; D.D.S., Columbia, 1948

STOMATOLOGY

Frank E. Beube. *Clinical Professor of Dentistry*

L.D.S., D.D.S., Toronto, 1930

Jack Budowsky. *Associate Clinical Professor of Dentistry*

D.D.S., Columbia, 1943

Joseph A. Cuttita. *Associate Professor of Dentistry*

A.B., Fordham, 1932; M.S., 1935; D.D.S., Columbia, 1939

Lewis Fox. *Associate Clinical Professor of Dentistry*

D.D.S., Maryland, 1927

Robert Gottsegen. *Associate Clinical Professor of Dentistry*

A.B., Michigan, 1939; D.D.S., Columbia, 1943

Leonard Hirschfeld. *Associate Clinical Professor of Dentistry*

A.B., Columbia, 1941; D.D.S., 1944

Ellen N. Hosiosky. *Assistant Clinical Professor of Dentistry*

D.M.D., Basle, Switzerland, 1935; D.H., Guggenheim Dental Clinic, 1939; D.D.S., Columbia, 1947

Austin H. Kutscher. *Assistant Clinical Professor of Dentistry*

B.S., New York University, 1945; D.D.S., Columbia, 1946

Jesse L. Lefcourt. *Assistant Clinical Professor of Dentistry*

B.S., Columbia, 1929; D.D.S., 1931

Irwin D. Mandel. *Assistant Clinical Professor of Dentistry*

B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945

Melvin Morris. *Associate Clinical Professor of Dentistry*

B.S., College of the City of New York, 1934; M.A., Columbia, 1937; D.D.S., 1941

Ferdinand A. Tuoti. *Assistant Clinical Professor of Dentistry*

D.M.D., Harvard, 1928

Edward V. Zegarelli. *Edwin S. Robinson Professor of Dentistry*

A.B., Columbia, 1934; D.D.S., 1937; M.S., Chicago, 1943

RESEARCH ASSOCIATES

Carlos J. Dalmau, M.D. (*Psychiatry*)

Sidney L. Horowitz, D.D.S.

Herbert F. Silvers, D.D.S.

George Stein, M.D., D.M.D.

Benjamin Tenenbaum, D.D.S.

INSTRUCTORS (*continued*)

Patricia Farnsworth, M.S.

(*Physiology*)

Herman Gladstone, M.D.

(*Anatomy*)

Benjamin W. Glick, M.D.

(*Anatomy*)

Ida M. Golomb, D.D.S.

Stanley S. Heller, D.D.S.

Norman H. Joondeph, D.D.S.

George Kiriakopoulos, D.D.S.

Seymour Koster, D.D.S.

Philip Kutner, D.D.S.

Leonard Levine, Ph.D. (*Physiology*)

Henry P. Levy, D.D.S. (*Anatomy*)

Evald Linder (*Dental Technic*)

Julius G. Littman, M.D. (*Anatomy*)

Louis J. Loscalzo, D.D.S.

INSTRUCTORS

Seymour Albus, D.D.S.

Barbara O. Alving, M.D. (*Physiology*)

Julian W. Anderson, D.D.S.

Harold D. Baurmash, D.D.S.

Marc L. Berg, D.D.S.

Pandelis Camesas, D.D.S.

Charles M. Chayes, D.D.S.

Harold P. Cobin, D.D.S.

Kenneth C. Deesen, D.D.S.

INSTRUCTORS (*continued*)

George V. Lyons, D.D.S.
 Louis Mandel, D.D.S.
 Lawrence Marder, D.D.S.
 George A. Minervini, D.D.S.
 Gerd Muelheims, M.D. (*Physiology*)
 Bernard Nathanson, D.D.S.
 Mero Nocenti, Ph.D. (*Physiology*)
 John D. Piro, D.D.S.
 Thomas W. Portway, D.D.S.
 Arnold Rosenberg, D.D.S.
 G. Richard Rowley, Ph.D.
 (*Physiology*)
 Janice Schreiber, D.D.S.
 Steven Scrivani, D.D.S.
 Joseph Serio, D.D.S.
 Boaz Shattan, D.D.S.
 Alvin L. Solomon, D.D.S.
 Walter Spengeman, D.D.S.
 Eugene M. Tedaldi, D.D.S.
 Edward E. Teltsch, D.D.S.
 Bernard H. Wasserman, D.D.S.

ASSISTANTS

Paul I. Addison, D.D.S.
 Mark L. Benes, D.D.S.
 Gerald H. Besen, D.D.S.
 Abraham M. Blechman, D.D.S.
 David Blistein, D.D.S.
 Jack M. Breuer, D.D.S.
 Morton S. Brod, D.D.S.
 Victor S. Caronia, D.D.S.
 Robert M. Cole, D.D.S.

ASSISTANTS (*continued*)

Marvin Firdman, D.D.S.
 Monroe M. Gliedman, D.D.S.
 Richard Gliedman, D.D.S.
 Albert Green, D.D.S.
 Robert J. Kelley, D.D.S.
 Edward P. Kessler, D.D.S.
 Robert G. Kroll, D.D.S.
 Solomon Snyder, D.D.S.
 Agate Suurkivi, D.D.S.
 Issacher Yavelow, D.D.S.

LECTURERS

Carlisle C. Bastian, D.D.S.
 Bernard S. Chaikin, D.M.D.
 Robert L. Fisher, D.D.S.
 Henry M. Goldman, D.M.D.
 Joseph E. Johnson, D.D.S.
 Saul Misheloff, D.D.S.
 Bissell B. Palmer, D.D.S.
 (*Public Health*)
 Arnold C. Rosenberg, D.D.S.

CURATOR OF THE MUSEUM

Curt Proskauer, D.M.D.

RESEARCH ASSISTANTS

Robert J. Huettner, D.D.S.
 Solomon L. Katz, D.D.S.
 Joseph Luban, D.D.S.
 Hans H. Neumann, M.D.

► PRESBYTERIAN HOSPITAL DENTAL SERVICE

DIRECTOR: William J. Savoy

CONSULTANTS: Adolph Berger, Houghton Holliday, Carl R. Oman, Joseph Schroff,
Albin R. Seidel

DIAGNOSTIC SERVICE

Attending Dental Surgeon: Edward V. Zegarelli

Associate Attending Dental Surgeon: Joseph A. Cuttita

Assistant Attending Dental Surgeons: Jack Budowsky, Laszlo Schwartz

ORAL SURGERY SERVICE

Attending Dental Surgeon: William J. Savoy

Associate Attending Dental Surgeon: Alvin S. Nathan

Assistant Attending Dental Surgeons: Kourken A. Daglian, Boaz Shattan, Robin
M. Rankow

OPERATIVE DENTISTRY SERVICE

Associate Attending Dental Surgeon: Edward A. Cain, Jr.

PATHOLOGICAL SERVICE

Associate Attending Dental Surgeon: Lester R. Cahn

PEDODONTIC SERVICE

Attending Dental Surgeon: Solomon N. Rosenstein

PERIODONTIA SERVICE

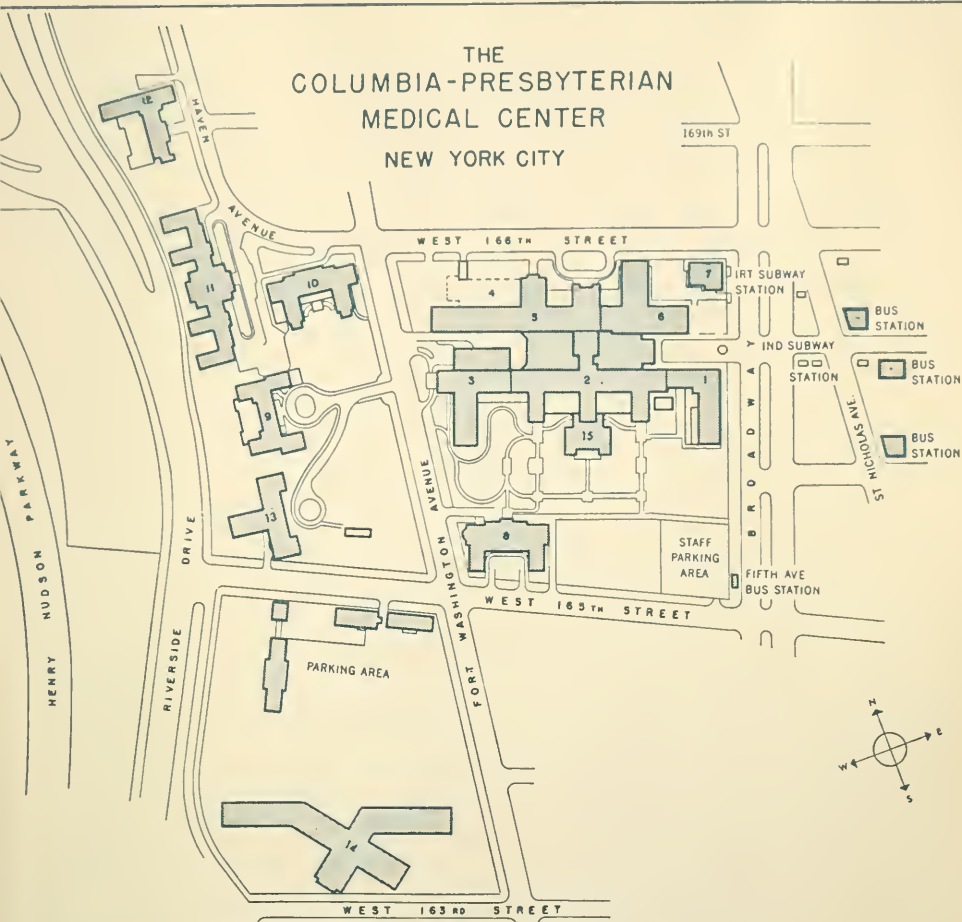
Assistant Attending Dental Surgeon: Frank E. Beube

PROSTHODONTIC SERVICE

Attending Dental Surgeon: Gilbert P. Smith

Assistant Attending Dental Surgeons: Sebastian A. Bruno, Robert E. Herlands

THE
COLUMBIA-PRESBYTERIAN
MEDICAL CENTER
NEW YORK CITY



- | | |
|---------------------------------------|---|
| 1. BABIES HOSPITAL | 7. N. Y. CITY DEPT. OF HEALTH |
| 2. PRESBYTERIAN HOSPITAL | SCHOOL OF PUBLIC HEALTH AND |
| N. Y. ORTHOPAEDIC HOSPITAL | ADMINISTRATIVE MEDICINE |
| SLOANE HOSPITAL | 8. INSTITUTE OF OPHTHALMOLOGY |
| SQUIER UROLOGICAL CLINIC | 9. MAXWELL HALL |
| 3. HARKNESS PAVILION | 10. NEUROLOGICAL INSTITUTE |
| 4. POWER HOUSE | 11. N. Y. STATE PSYCHIATRIC INSTITUTE |
| 5. COLLEGE OF PHYSICIANS AND SURGEONS | 12. BARD HALL |
| 6. VANDERBILT CLINIC | 13. HARKNESS MEMORIAL HALL |
| SCHOOL OF DENTAL AND ORAL SURGERY | 14. FRANCIS DELAFIELD HOSPITAL, N.Y.C. |
| | 15. PAULINE A. HARTFORD MEMORIAL CHAPEL |

Columbia University Bulletin

SERIES 60

NUMBER 32

AUGUST 6, 1960

School of
Dental
and
Oral Surgery

1960-1961

Academic Calendar, 1960-1961

Sept	6-7	Tuesday-Wednesday. Registration, including payment of fees. Later registration requires payment of a late fee.
	12	Monday. Classes begin.
Nov	8	Tuesday. Election Day. Holiday.
	24	Thursday. Thanksgiving Day. Holiday.
	26	Saturday. First trimester ends.
	28	Monday. Second trimester begins.
Dec	19	Monday, through January 2, 1961, Monday. Christmas Holidays.
Feb	22	Wednesday. Washington's Birthday. Holiday.
	25	Saturday. Second trimester ends.
	27	Monday. Third trimester begins.
Mar	1	Wednesday. Last day for filing application or renewal of application for all degrees and certificates to be awarded in June. Later filing of application requires payment of a late fee.
	27	Monday, through April 2, Sunday. Easter Holidays.
May	1	Monday. Last day for filing <i>late</i> application for June degrees.
	20	Saturday. Last day of classes.
	22-26	Monday-Friday. Final examinations.
	30	Tuesday. Memorial Day. Holiday.
June	6	Tuesday. Award of degrees and certificates.

Columbia University in the City of New York

School
of Dental
and
Oral Surgery
1960-1961

The Faculty of Dental and Oral Surgery

Grayson Kirk, Ph.D., LL.D. *President of the University*

John A. Krout, Ph.D., L.H.D. *Vice-President of the University*

Jacques Barzun, Ph.D. *Dean of Faculties and Provost of the University*

H. Houston Merritt, M.D. *Vice-President in Charge of Medical Affairs*

Gilbert P. Smith, D.D.S. *Dean*

Howard A. Arden, D.D.S. *Associate Professor of Dentistry*

Frank E. Beube, L.D.S., D.D.S. *Clinical Professor of Dentistry*

Edward A. Cain, Jr., D.D.S. *Professor of Dentistry*

Wilfred M. Copenhaver, Ph.D. *Professor of Anatomy*

Joseph A. Cuttita, D.D.S. *Associate Professor of Dentistry*

Nicholas A. Di Salvo, D.D.S., Ph.D. *Professor of Dentistry*

Rudolph H. Friedrich, D.D.S. *Professor of Dentistry*

Harry A. Galton, D.D.S. *Clinical Professor of Dentistry*

Magnus I. Gregersen, Ph.D. *Dalton Professor of Physiology*

Robert E. Herlands, D.D.S. *Professor of Dentistry*

John J. Lucca, D.D.S. *Associate Professor of Dentistry*

Donald G. McKay, M.D. *Delafield Professor of Pathology*

David Rittenberg, Ph.D. *Professor of Biochemistry*

Harry M. Rose, M.D. *John E. Borne Professor of Medical and Surgical Research*

Solomon N. Rosenstein, D.D.S. *Professor of Dentistry*

William J. Savoy, D.D.S. *Clinical Professor of Dentistry*

Laszlo Schwartz, D.D.S. *Clinical Professor of Dentistry*

Frances A. Stoll, Ed.D. *Professor of Dental Hygiene*

Harry B. van Dyke, Ph.D., M.D. *Hosack Professor of Pharmacology*

Edward V. Zegarelli, D.D.S. *Edwin S. Robinson Professor of Dentistry*

Program of Study

The Columbia program in dentistry requires four academic years to complete and leads to the degree of Doctor of Dental Surgery. The aim of the curriculum is to enable the student to acquire a knowledge of the fundamental sciences in relation to dentistry and of the techniques of solving dental problems. The first two years are devoted to a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, and physiology, along with the fundamentals of operative and prosthetic dentistry, oral surgery, periodontology, and psychiatry. The student thereby prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skill required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by the division of classes into small sections, by conferences, and by the comprehensive case method of instruction.

The student's voluntary participation in research projects of his own choosing and in programs under the guidance of the faculty is earnestly encouraged. Members of the William Jarvie Society for Dental Research, the undergraduate research and honor society, undertake individual and team projects under the direction of members of the faculty. Lectures on the principles and practice of research are provided for the membership. In addition, students assist in the execution of studies being pursued by faculty members. A limited number of student research fellowships are available for summer work under the direction of the staff. The scope of student research includes critical reviews of the literature, clinical studies in the techniques of the various disciplines of dentistry, and the evaluation of newer therapeutic agents and dental materials. Work in the basic sciences is encouraged.

The administrative offices and the clinical and research facilities of the School of Dental and Oral Surgery occupy three floors of the Vanderbilt Clinic wing of the Columbia-Presbyterian Medical Center, one of the great institutions of its kind in the East.

THE DENTAL CLINIC

The School benefits in many ways by its association with the Medical Center. One of the functions of its clinic is the dental care of patients in the Center's hospitals. Dental students are given a unique opportunity to gain experience in the diag-

nosis and care of those cases where a relationship exists between oral and general systemic diseases. The student also learns at first hand the problems of providing dental care for the hospitalized patient. The wards and outpatient departments of the Center give the closest possible contact and association with all branches of the health services.

THE LIBRARY

The Medical Library occupies parts of the three lower floors in the College of Physicians and Surgeons. It provides current literature, both books and journals, for faculty and students, and it aids in research through its own collection of current and historical works and through its unique bibliographic service.

► POSTGRADUATE TRAINING

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1960–1961 short refresher courses will be offered in various subjects. Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses.

The School is also authorized to grant certificates of training in special branches of dentistry. Study for the certificate of training includes special work in the clinical and basic science branches of dentistry approved by the Dean. At present, a sixteen-month course is offered to qualify graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, and periodontology.

For further information see the bulletin of Postgraduate Courses for Dentists, which may be obtained from the Admissions Office, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University: anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain depart-

ments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the bulletin of the Graduate Faculties, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N.Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Director, School of Public Health and Administrative Medicine, 600 West 168th Street, New York 32, N.Y.

► COURSES FOR DENTAL HYGIENISTS

Columbia offers two programs of study in dental hygiene. The program for the Bachelor of Science degree includes a minor in public health; it also offers the subjects required by New York State for a permanent dental hygiene teacher's license. The purpose of the program is to give students the wide range of professional experience available in a large medical center, to perfect dental health techniques, and to provide these educational experiences in an ethical environment. Advanced education leading to the Master of Science degree is provided for those who wish to teach dental hygiene or to fill administrative or supervisory posts in other university schools for dental hygienists. The programs are open only to women.

For a special bulletin describing the programs of study address the Director, Courses for Dental Hygienists, 630 West 168th Street, New York 32, N.Y.

Courses of Instruction

The University reserves the right to withdraw or modify the courses of instruction or to change the instructors at any time.

ANATOMY

Anatomy 115. Oral microscopic anatomy and embryology

Professor Applebaum and staff. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150. Microscopic anatomy

Professor Copenhagen and staff. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as *Anatomy 101F* in the Medical School.

Anatomy 151. Gross anatomy

Professors Moss, Rogers, and staff. Freshman year.

Regional dissections of the complete body are augmented by lectures stressing *functional* interpretations. The course is oriented to the basic principles of human biology, with emphasis on pertinent anthropological and clinical topics.

Anatomy 152. Embryology

Professor Copenhagen and staff. Freshman year.

Lectures and demonstrations correlating developmental anatomy with gross anatomy and with microscopic anatomy.

Anatomy 153. Neuroanatomy

Professors Carpenter and Noback, and assistants. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to *Anatomy 106S* in the Medical School.

Anatomy 252. Functional anatomy of the head and neck

Professors Moss and Rankow. Junior year.

A concise review of the functional interrelationships in this region and their dynamic significance. Pertinent clinical topics are analyzed from this viewpoint.

BIOCHEMISTRY

Biochemistry 150. Principles of biochemistry

Professors Eisenberg and Gillespie. Freshman year.

A study of the chemical constitution of natural products and their metabolism to yield cellular constituents and the energy requirements of the mammalian cell.

MEDICINE

Medicine and Casualty Care 278 and 279. General survey of medicine; first aid in civil defense

Professor Rankow and members of the Presbyterian Hospital staff. Junior and senior years.

The cardinal manifestations of disease are reviewed from the differential diagnostic point of view. The disorders of the various organ systems as well as those resulting from endocrine and metabolic dysfunction are studied. Emergency first-aid measures are presented for management of the casualties in civil defense.

MICROBIOLOGY

Microbiology 151. General medical microbiology and immunology

Professor Ellison. Sophomore year.

Laboratory and conferences.

Microbiology 152. Principles of microbiology, immunology, and epidemiology

Professor Ellison. Sophomore year.

This course is similar to *Microbiology 105F* in the Medical School. Lectures on oral microbiology are substituted for several of those of the medical series.

ORTHODONTICS

Orthodontics 241. Principles of orthodontics

Professor Di Salvo and staff. Junior year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and construction of fixed and removable appliances used as space maintainers. In addition, simple appliances used in tooth guidance procedures, which are considered to be within the province of the general practitioners of dentistry, are constructed.

Orthodontics 242. Orthodontic clinic

Professor Di Salvo and staff. Senior year.

Students obtain clinical experience in the use of appliances constructed in the laboratory. They treat patients with orthodontic problems which require either preventive measures or minor tooth movement.

PATHOLOGY

Pathology 150. General and special pathology

Professor McKay and staff. Sophomore year.

Lectures, demonstrations, and laboratory work designed to give the student a comprehensive understanding of the mechanisms of disease. Special emphasis is placed on general pathology and on disorders of the respiratory, cardiovascular, and osseous systems.

Pathology 246. Oral pathology

Professor Cahn and staff. Junior year.

Lectures, demonstrations, conferences, and laboratory work on diseases of the jaws, teeth, and soft tissues about the oral cavity.

Pathology 247. Oral pathology seminar

Professor Cahn. Senior year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS

Pedodontics 202. Pedodontics lectures and clinic

Professor Rosenstein and staff. Senior year.

Lectures, conferences, and clinical practice relating to operative dental procedures for children, management of child dental patients, and application of present knowledge of dental development and preventive dentistry.

PERIODONTOLOGY**Periodontology 151. Periodontia lectures, seminars, and clinic**

Professor Beube and staff. Sophomore year.

Lectures and seminars in the diagnosis, etiology and treatment of periodontal diseases. Clinical practice in periodontal examination, prescribing dental prophylaxis, subgingival curettage, and oral hygiene.

Periodontology 251. Periodontia lectures, seminars, and clinic

Professor Beube and staff. Junior year.

Lectures and seminars on periodontal surgery, occlusal traumatism, selective tooth grinding, and temporary splinting. Clinical practice in subgingival curettage, selective tooth grinding, wire ligation, and standard periodontal surgical techniques.

Periodontology 252. Periodontia lectures and seminars

Professor Beube and staff. Senior year.

Lectures and seminars on the history of treatment methods, special problems in periodontal surgery, fixed splinting, periodontal histology and histopathology, and treatment-planning.

Periodontology 253. Periodontia clinic

Professor Beube and staff. Senior year.

Continuation of *Periodontology 251* and advanced periodontal surgical techniques.

PHARMACOLOGY**Pharmacology 150. Introduction to pharmacology**

The staff. Junior year.

By means of the lectures in this course, the student is introduced to a wide variety of drugs. The effects of many of these drugs on man and lower animals are demonstrated in the laboratory. Emphasis is placed upon general pharmacological principles to assist the student in the rational use of drugs and in the evaluation of new remedies as they may be introduced.

PHYSIOLOGY**Physiology 150. Mammalian physiology**

Professor Root and staff. Sophomore year.

Lectures, conferences, demonstrations, and laboratory. The function of the various organ systems of the mammalian body and their interrelations are studied.

PSYCHIATRY

Psychiatry 150. Psychiatry for the dentist. Professor Cattell. Junior year. Not given in 1960-1961.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH**Public Health 222. Principles of public health**

Professor Bushel and staff. Senior year.

Survey course in the theory and practice of general public health with more detailed discussion of dental public health topics. Included are several background sessions on epidemiology, preventive medicine, and statistics as well as presentations of public health programs at the federal, state, and local levels. Dental public health sessions feature existing programs, dental prepayment, community dental surveys, the dentist and his professional society, and dental health education resources.

RESTORATIVE DENTISTRY**Anatomy 101. Oral anatomy**

Professor Arden and staff. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Dental Materials 125 and 126. Physical properties of dental materials

Professor Ayers. Freshman and sophomore years.

Lectures and demonstrations relating the action of the restorative and accessory dental materials with the oral tissues in function.

Operative Dentistry 130 and 131. Elements of operative dentistry

Professor Cain and staff. Freshman and sophomore years.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233. Operative clinical practice

Professor Sherman and staff. Junior year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234. Advanced clinical practice

Professor Cain and staff. Senior year.

A continuation in lectures and clinic of *Operative Dentistry 233* with the consideration of special problems in operative practice, including endodontia.

Prosthetics 104 and 105. Crown and bridge lectures and technique

Professor Arden and staff. Freshman and sophomore years.

Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.

Prosthetics 157. Prosthetic lectures and technique

Professor Arden and staff. Sophomore year.

Lectures and technical procedures in full and removable partial denture construction.

Prosthetics 205. Crown and bridge lectures and technique

Professor Herlands. Junior year.

Lectures on the clinical procedures in crown and bridgework.

Prosthetics 206. Crown and bridge clinic

Professor Herlands and staff. Junior year.

Clinical construction of elementary crown and bridgework.

Prosthetics 210. Crown and bridge lectures

Professor Herlands. Senior year.

Lectures and conferences on various types of bridgework.

Prosthetics 211. Crown and bridge clinic

Professors Smith and Herlands, and staff. Senior year.

Clinical construction of crown and bridgework.

Prosthetics 212. Applied occlusal dynamics

Professor Cohn. Junior year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260. Prosthetic lectures

Professors Lucca and Hindels. Junior year.

Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.

Prosthetics 261 and 263. Prosthetic lectures

Professors Smith and Lucca, and staff. Junior and senior years.

Clinical construction of full and partial dentures.

Prosthetics 264. Prosthetic lectures

Professor Lucca. Senior year.

A series of lectures on clinical consideration in prosthodontic diagnosis, design, and construction.

Prosthetics 265. Surgical prosthesis

Professor Bruno. Senior year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

STOMATOLOGY

Diagnosis 212. Diagnosis lectures and clinic

Professors Zegarelli, Cuttita, and Budowsky. Junior year.

Lectures on methods of diagnosis, pulp symptomatology, radiographic interpretation, anomalies, and diseases of the mouth and jaws; clinical practice in diagnostic examination and history-taking.

Diagnosis 213. Diagnosis clinic

Diagnosis staff. Senior year.

Clinical practice in diagnostic procedures and techniques, comprehensive diagnosis including treatment-planning, and clinical and laboratory diagnosis of diseases of the mouth and jaws.

Diagnosis 214. Diagnosis lectures

Professor Zegarelli. Senior year.

Lectures and discussions on the diseases of the maxilla and mandible and tumors of the mouth; demonstrations of diagnostic techniques.

Diagnosis 215. Diagnosis lectures

Professor Zegarelli and staff. Senior year.

Lectures and discussions on focal infection, psychosomatics in dentistry, and hemorrhagic diseases of the mouth.

Radiology 267. Radiology lectures and clinic

Professor Budowsky and staff. Junior year.

Lectures and discussions on history, physics, and electronics of radiology; studies on radiobiology, radiotherapy, radiation hazards, and protections; clinical practice in intra- and extraoral radiography; demonstrations of temporomandibular joint and laminography techniques.

Therapeutics 286.

Professor Kutscher. Junior year.

Lectures, conferences, and clinical experience in the application of the principles of pharmacotherapeutics to general practice. The course is specifically integrated with the lectures of *Diagnosis 212* in regard to indications for therapy, choice of drugs, modes of administration, and side reactions.

SURGERY

Surgery 168. Principles of surgery

Professor Rankow. Sophomore year.

Lectures, seminars, and basic principles of general surgery.

Surgery 270A. Oral surgery

Professor Friedrich and staff. Sophomore year.

Lectures and seminars on local anesthesia and history of anesthesia; chemistry of various local anesthetic agents; indications for use; infiltration and block techniques described. Basic principles of instrumentation for removal of teeth.

Surgery 270B. Oral surgery

Professor Friedrich and staff. Junior year.

Demonstrations, lectures, and clinical practice in local anesthesia and the removal of teeth; lectures on surgical flaps; preparation of the mouth for prosthesis; exodontia technique.

Surgery 272. Oral surgery

Professor Friedrich and staff. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia.

Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274. Oral surgery seminar

Professor Friedrich and staff. Senior year. Required.

Seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation of malignancies associated with the oral cavity and facial regions. Preoperative and postoperative case presentations of maxillofacial malignancies.

THEORY AND PRACTICE OF DENTISTRY**Theory and Practice 280. Dental ethics, jurisprudence, and practice administration**

Professor Hunt. Junior year.

Lectures covering opportunities in the field of dentistry, selecting a location, planning and equipping an office; development of habits leading to personal health and professional success. Introduction to dental ethics and the law relating to dental practice. Handling patients under clinic conditions, and dental records.

Theory and Practice 281. Dental ethics, jurisprudence, and practice administration

Professor Hunt. Senior year.

Lectures and seminars covering the codes of ethics, intraprofessional relations, areas of legal liability, malpractice, contracts, establishing fees, office procedures, psychology of handling patients and practice-building.

Theory and Practice 283. Clinical oral physiology

Professor Schwartz and staff. Senior year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and conferences.

Theory and Practice 285. Comprehensive case

The staff. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of x-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 287. History of dentistry

Professor Schwartz. Freshman year.

This course orients the student to the whole of dentistry through the study of its history. The origins, growth, and trends in the development of the scientific and technical principles of modern dentistry are considered in lectures and conferences. The technique of utilizing the literature of dentistry is described.

Summary of the Program

The letters following the course numbers indicate the trimester in which the course is given: F, first; S, second; T, third.

► FOR THE CLASSES OF 1961, 1962, AND 1963

SECOND YEAR	<i>Hours</i>		
	<i>Class</i>	<i>Lab/Clin</i>	<i>Total</i>
Dental Materials 126T		33	33
Microbiology 151F and 152F	33	99	132
Operative Dentistry 131FST	22	198	220
Pathology 150ST	54	144	198
Periodontology 151ST	24	42	66
Physiology 150FS	56	153	209
Prosthetics 105F		99	99
Prosthetics 157ST		187	187
Surgery 168S	11		11
Surgery 270AT	11		11
			<hr/> 1,166

THIRD YEAR			
Anatomy 252T	11		11
Diagnosis 212FST	33	50	83
Medicine and Casualty Care 278T	22	22	44
Operative Dentistry 233FST	33	121	154
Orthodontics 241F	22	49	71
Pathology 246F	22	44	66
Periodontology 251S	11	30	41
Pharmacology 150FS	55	33	88
Prosthetics 205F		60	60
Prosthetics 206ST	11	94	105
Prosthetics 212T	30		30
Prosthetics 260FT and 261FST	22	153	175
Radiology 267FS	11	14	25
Surgery 270BFST	11	16	27
Theory and Practice 280T	11		11
Therapeutics 286S	11		11
			<hr/> 1,002

FOURTH YEAR

	<i>Hours</i>		
	<i>Class</i>	<i>Lab/Clin</i>	<i>Total</i>
Diagnosis 213FS		50	50
Diagnosis 214F		22	22
Diagnosis 215T	11		11
Medicine and Casualty Care 279F	9		9
Operative Dentistry 234FST	22	322	344
Orthodontics 242FST		15	15
Pedodontics 202FST	22	91	113
Periodontology 252FS and 253F	22	30	52
Prosthetics 210S and 211FST	11	135	146
Prosthetics 263FST and 264T	11	164	175
Prosthetics 265T	11	19	30
Public Health 222ST	22		22
Surgery 272FST	44	30	74
Surgery 274F	11		11
Theory and Practice 281FT	22		22
Theory and Practice 283T	11		11
Theory and Practice 285T			
			<hr/> 1,107

► FOR THE CLASS OF 1964

FIRST YEAR	<i>Hours</i>		
	<i>Class</i>	<i>Lab/Clin</i>	<i>Total</i>
Anatomy 101ST		123	123
Anatomy 115ST	24	48	72
Anatomy 150FS	42	126	168
Anatomy 151FS	50	223	273
Anatomy 152F	22		22
Anatomy 153S	22	44	66
Biochemistry 150ST	57	114	171
Operative Dentistry 130T	11	22	33
Physiology 150ST	60	139	199
Theory and Practice 287T	11		11
			<hr/> 1,138

SECOND YEAR			
Dental Materials 125 and 126FS		66	66
Genetics 171F	11		11
Microbiology 151 and 152F	44	99	143
Operative Dentistry 131FST	33	165	198
Pathology 150FS	44	132	176
Pathology 246T	22	44	66
Pharmacology 150T	55	33	88
Prosthetics 104, 105, and 205FS	20	160	180
Prosthetics 157ST	13	175	188
Surgery 168S	11		11
Surgery 270AT	11		11
			<hr/> 1,138

THIRD YEAR

	<i>Hours</i>		
	<i>Class</i>	<i>Lab/Clin</i>	<i>Total</i>
Anatomy 252T	11		11
Diagnosis 212FST	33	40	73
Medicine and Casualty Care 278T	22	22	44
Operative Dentistry 233FST	22	229	251
Orthodontics 241F	22	49	71
Periodontology 151 and 251FST	35	97	132
Prosthetics 206FST	11	178	189
Prosthetics 212S	30		30
Prosthetics 260, 261, and 263FST	22	148	170
Psychiatry 150	11		11
Radiology 267FST	11	14	25
Statistics 291F	11		11
Surgery 270B	11	16	27
Theory and Practice 280T	11		11
Therapeutics 286S	11		11
			<hr/> 1,067

FOURTH YEAR

Diagnosis 213FST	22	25	47
Diagnosis 214 and 215F	33		33
Medicine and Casualty Care 279F	9		9
Operative Dentistry 234FST	22	333	355
Orthodontics 242FST		17	17
Pedodontics 202FST	22	91	113
Periodontology 252FS	22		22
Periodontology 253		30	30
Prosthetics 210S	11		11
Prosthetics 211FST		150	150
Prosthetics 264T	11		11
Prosthetics 261 and 263FST		151	151
Prosthetics 265T	11	19	30
Public Health 222ST	22		22
Surgery 272FST	33	50	83
Surgery 274F	11		11
Theory and Practice 281FS	22		22
Theory and Practice 283T	11		11
Theory and Practice 285FST			
			<hr/> 1,128

Admission, Registration and Expenses

Candidates should apply during the academic year preceding that for which they seek admission, on application blanks obtained from the Committee on Admissions, School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application must be accompanied by a check or money order for \$15, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable and is not credited toward tuition.

The State Department of Education has special requirements with which students who are not citizens of the country must comply. Foreign students who wish to apply should communicate with the Dean.

Required preparation: three full years at an acceptable college of arts and sciences, including the following courses required by the State Board of Regents (6 points of each). English composition and literature, physics, biology, inorganic chemistry, and organic chemistry.

Recommended preparation: additional courses in quantitative, qualitative, physical, and organic chemistry; physics; comparative anatomy. Advanced courses in biology. Courses in mathematics, German and French, sociology, history, and the fine and industrial arts.

It is not necessary to complete the academic requirements before applying, but all requirements must be completed before matriculation. The admission of a student depends primarily on his preparation and intellectual capacity, but it also depends upon judgments of his character and health.

DENTAL APTITUDE TESTS

All applicants must take the Dental Aptitude Tests, which are conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

ACCEPTANCE FEE

Within one month after he receives notice of his acceptance, an applicant must notify the Committee on Admissions that he intends to enroll and must send a check or money order for \$200 made payable to Columbia University. If he registers for the term to which he has been admitted, the fee will be credited toward his tuition; if he does not register, the fee will not be refunded.

COMBINED COURSES

With Barnard College. Under the "professional option" plan, students from Barnard College may receive the Bachelor of Arts degree from Barnard after the completion of three years of undergraduate work and the first year in the School of Dental and Oral Surgery. To be eligible for this privilege, before entering the School the student must have completed at Barnard 90 points of academic work (including all specific requirements), a major of 28 points, and the major examination or thesis.

With the School of General Studies. Students from the School of General Studies may exercise the professional option after the completion of 94 points (including all courses prescribed for the Bachelor of Science degree), not less than 64 of which must have been taken at Columbia University.

In medicine and dentistry. It is usually possible for a graduate of a registered medical school who holds the degree of Doctor of Medicine to meet the requirements of the School and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one summer session.

► REGISTRATION

Before attending classes, students must register in person at the Office of the Registrar on September 6–7, 1960. Registration consists of filling out forms required for University records and paying the fees. Late registration requires the approval of the Dean of the School and the payment of a late fee (see below).

REGULATIONS

Each person whose registration has been completed will be considered a student of the University during the term for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is first registered.

The privileges of the University are not available to any student until he has completed his registration. Since, under the University statutes, payment of fees is part of registration, no student's registration is complete until his fees have been paid. No student is permitted to attend any University course for which he is not officially registered unless he has been granted auditing privileges. No student may register after the stated period unless he obtains the written consent of the proper dean or director.

ATTENDANCE AND LENGTH OF RESIDENCE

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work.

Students are held accountable for absences incurred owing to late enrollment. Any student whose religious duties conflict at any time with academic requirements should apply to his dean or director for an equitable solution.

A student in good standing may, for reasons of weight, be granted a leave of absence by the dean or director of the division of the University in which he is registered.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems proper. The disciplinary authority of the University is vested in the President and, subject to his reserved powers, in the dean of each faculty and the director of the work of each administrative board.

► FEES

Tuition, the comprehensive fee, the student health service fee, and laboratory deposits are payable each term in advance and as part of registration. If these fees are paid after the last day of registration (see the Academic Calendar), they will not be reduced, and a late fee of \$6.00 will be imposed.

The following fees are prescribed by statute for the full program for one year for a candidate for the D.D.S. degree and are subject to change at any time at the discretion of the Trustees. Fees for a partial program are assessed by the Registrar as provided by the University statutes.

Comprehensive fee	\$ 100.00
Tuition	1,350.00
Student health service fee	37.80
For all full-time students, per academic year (see below)	

APPLICATION FEES AND LATE FEES

Application for admission	\$15.00
Application for each special examination	10.00
For renewal of application for a degree	1.00
For late registration	6.00
For late application for a special examination	5.00
For late application, or late renewal of application, for a degree	5.00

FEES FOR REPEATED COURSES

A student who is required to repeat the work for any one year must pay the full tuition.

WITHDRAWAL AND ADJUSTMENT OF FEES

A student who decides to withdraw from the University must notify the Registrar in writing at once. If he is under twenty-one years of age, his parent or guardian must first give consent in writing to the Registrar. He will be given an honorable discharge provided he is in good academic standing and not subject to discipline. At the Registrar's discretion and according to University policy, he will also be given a proportionate rebate of the tuition fees that he has paid. The rebate will be reckoned from the day on which the Registrar receives the student's written notification of withdrawal. The comprehensive fee, the student health service fee, application fees, late fees, and special fees are not refundable.

STUDENT HEALTH SERVICE FEE

The student health service fee will be used to pay the annual premium of the Associated Hospital Service of New York for hospital insurance and to pay part of the cost of the Student Health Service. Students who already have hospital insurance will not be charged the cost of the premium.

Daily office hours are held by the Student Health Service, Room 2-220, Vanderbilt Clinic. Members of the health service are available to attend ill students if they live near the Medical Center. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under the terms of an insurance policy of the Associated Hospital Service of New York.

RENEWAL OF APPLICATION FOR THE D.D.S. DEGREE

An application for the D.D.S. degree terminates at the next regular time for the issuance of diplomas subsequent to the date of filing, but it may be renewed for a fee of \$1.00 each time that the candidate chooses to come up for consideration.

► ESTIMATED EXPENSES

The approximate cost of attending the School for an academic year of nine months is as follows:

	<i>Average</i>	<i>Minimum</i>
Tuition and fees for a full program	\$1,487.80	\$1,487.80
Room in one of the dormitories	400.00	250.00
Board in a University dining hall	550.00	510.00

In addition each student should budget for such items as clothing, laundry and dry cleaning, travel, dues to organizations, amusements, and sundries. Those who live at home probably spend from \$100 to \$150 for lunches during the year.

BOOKS AND EQUIPMENT

Books. The approximate cost of books will be: in the freshman year, \$200; in the sophomore year, \$100; in the junior year, \$135; in the senior year, \$45. Books may be purchased from the Medical Center Bookstore on the second floor of the

College of Physicians and Surgeons. The store is maintained expressly for the convenience of the students and staff of the Medical Center schools and hospitals.

Instruments and supplies. Each student must buy, from the University, the original package outfit of instruments specified in the official instrument list. Unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. Students may not buy more than is required to complete a case. The approximate cost of instruments is: in the freshman year, \$650; in the sophomore year, \$550; in the junior year, \$450; in the senior year, \$120. Instruments must be paid for at the beginning of the academic year, but students who can demonstrate their need may borrow from the University or from the National Defense Student Loan Program to defray the cost.

Microscopes. Each entering student must purchase a satisfactory microscope of standard make, fitted with the following attachments: (a) triple nosepiece; (b) Abbe or variable focus condenser; (c) 10x and 6x oculars; (d) 16 mm. and 4 mm. objectives; (e) oil immersion lens.

Lockers. Each entering student is assigned a locker; he must use a combination lock as prescribed by the School.

► FINANCIAL AID

Students may apply for grants through the Dean's Office. New students should file application along with the application for admission. Grants are awarded only in combination with loans; any student who can demonstrate his need is eligible to apply. Application forms are issued by the Dean's Office.

Long-term loans at low interest rates are available from the University for tuition and fees, and under certain circumstances, for living expenses. Students who are United States citizens and residents of states having loan plans (Maine, Massachusetts, New York, and Vermont) are urged to apply to these sources. Federal loan funds are also available. Up to one month before the beginning of the academic year, dental students, along with other students who are concentrating in science, are given special consideration for National Defense Student Loans. Information on any of these loan plans may be obtained from the Office of Financial Aid, 322 University Hall. To insure an early decision, applications should be filed for the autumn term by September 1; for the spring term by December 1.

Deferred payment of tuition may be arranged through the Marine Midland Time Plan. A brochure describing the details of the Plan is issued by the Dean's Office.

The heavy schedule of the School makes it difficult for students to undertake outside part-time work during the academic year. If at all possible, other financial arrangements should be made.

► HOUSING

Booklets describing the University residence halls and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125

Livingston Hall, Columbia University, New York 27, N.Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. Rates for the academic year are \$250 to \$470 for men and \$285 to \$525 for women. Optional pre-paid board plans are available in the men's residence halls. In Johnson Hall, the residents are required to take breakfast and dinner there at a cost of \$400 for the academic year.

Students who wish to live off campus should write or call at the Registry of Off-Campus Accommodations, 115 Livingston Hall, Columbia University, New York 27, for an information sheet which describes the services rendered by the Registry.

International House, a privately owned student residence near the campus, has accommodations for about five hundred students, both foreign and American. Rates for the academic year are \$350 to \$700. To be eligible for admission a student must be at least twenty-one years old and must be registered for a minimum of twelve points or for a program of full-time research. Address the Committee on Admissions, International House, 500 Riverside Drive, New York 27.

In Woodbridge Hall, at 431 Riverside Drive, are one-bedroom, furnished apartments, which are rented for a twelve-month period to married graduate students. The rates range from \$1,260 to \$1,620 a year, including utilities. For further information and application forms write the Residence Halls Office, 125 Livingston Hall.

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates to relatives and guests of members of the University community.

► LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N.Y. All applications for admission to the examination should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

► STUDENT ORGANIZATIONS

OMICRON KAPPA UPSILON

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity, was chartered in the School of Dental and Oral Surgery in 1934. The purpose of the fraternity is to recognize and honor a maximum of 12 per cent of the members of the graduating senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

THE WILLIAM JARVIE SOCIETY

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and for which sophomores, juniors, and seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

► REGULATIONS**GRADING SYSTEM**

The following grading system is used: A, excellent; B, good; C, fair; F, failure.

REQUIREMENTS FOR PROMOTION

A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the officers of instruction under whom he has studied during the preceding year.

The School reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions of study in the School.

Students are classified for readmission or promotion under the following categories: (1) recommended for advancement; (2) recommended for readmission to the same class; (3) recommended neither for advancement nor for readmission to the same class.

GRADUATION

The degree of Doctor of Dental Surgery will be awarded upon completion of the prescribed curriculum. Diplomas are issued at the times stated in the Academic Calendar.

Officers of Instruction

ANATOMY

Wilfred M. Copenhaver. *Professor of Anatomy; Chairman of the Department*
A.B., Western Maryland, 1921; Ph.D., Yale, 1925

Edmund Applebaum. *Associate Professor of Dental Anatomy*
D.D.S., New York College of Dentistry, 1922

Dorothy D. Johnson. *Assistant Professor of Anatomy*
A.B., Bates, 1941; M.A., Vassar, 1943; Ph.D., Columbia, 1949

Melvin L. Moss. *Assistant Professor of Anatomy*
A.B., New York University, 1942; D.D.S., Columbia, 1946; Ph.D., 1954

Charles R. Noback. *Associate Professor of Anatomy*
B.S., Cornell, 1936; M.S., New York University, 1938; Ph.D., Minnesota, 1942

William M. Rogers. *Assistant Professor of Anatomy*
B.S., Georgia, 1921; Ph.D., Cornell, 1927

S. C. Shen. *Assistant Professor of Anatomy*
B.S., Yenching University, 1933; Ph.D., Cambridge, England, 1939

George K. Smelser. *Professor of Anatomy*
A.B., Earlham, 1929; Ph.D., Chicago, 1932

BIOCHEMISTRY

David Rittenberg. *Professor of Biochemistry; Chairman of the Department*
B.S., College of the City of New York, 1929; Ph.D., Columbia, 1934

Max A. Eisenberg. *Assistant Professor of Biochemistry*
A.B., Brooklyn, 1938; M.S., New York University, 1941; Ph.D., Duke, 1950

Horace B. Gillespie. *Assistant Professor of Biochemistry*
A.B., Lawrence, 1925; Ph.D., Illinois, 1930

MICROBIOLOGY

Harry M. Rose. *John E. Borne Professor of Medical and Surgical Research; Chairman of the Department*
A.B., Yale, 1928; M.D., Cornell, 1932

Sam M. Beiser. *Associate Professor of Microbiology*
Ph.D., Columbia, 1951

Solon A. Ellison. *Assistant Professor of Microbiology*
B.S., College of the City of New York, 1942; D.D.S., Columbia, 1946; Ph.D., 1958

Bernard F. Erlanger. *Associate Professor of Microbiology*
A.B., College of the City of New York, 1943; M.A., New York University, 1949; Ph.D., Columbia, 1951

Gabriel C. Godman. *Associate Professor of Microbiology*
A.B., New York University, 1941; M.D., 1944

Calderon Howe. *Associate Professor of Microbiology*

A.B., Yale, 1938; M.D., Harvard, 1942

Elvin A. Kabat. *Professor of Microbiology*

B.S., College of the City of New York, 1932; M.A., Columbia, 1934; Ph.D., 1937

Alice W. Knox. *Assistant Professor of Microbiology*

A.B., Vassar, 1927; Ph.D., Columbia, 1951

Councilman Morgan. *Associate Professor of Microbiology*

B.S., Harvard, 1943; M.D., Columbia, 1946

Beatrice C. Seegal. *Professor of Microbiology*

A.B., California, 1918; M.A., 1921; M.D., Johns Hopkins, 1924

Stuart W. Tanenbaum. *Associate Professor of Microbiology*

B.S., College of the City of New York, 1944; Ph.D., Columbia, 1951

ORAL SURGERY

Rudolph H. Friedrich. *Professor of Dentistry; Director of the Division*

D.D.S., Northwestern, 1930

Theodore M. Bundrant. *Associate Clinical Professor of Dentistry*

D.D.S., Howard, 1929

Kourken A. Daglian. *Assistant Clinical Professor of Dentistry*

B.S., College of the City of New York, 1941; D.D.S., Columbia, 1943

Morris Fierstein. *Associate Clinical Professor of Dentistry*

D.D.S., Columbia, 1921

Morris Kavelle. *Assistant Clinical Professor of Dentistry*

B.S., New York University, 1929; D.D.S., Columbia, 1933

Bertram Klatskin. *Assistant Clinical Professor of Dentistry*

A.B., Cornell, 1937; D.D.S., Columbia, 1941

Alvin S. Nathan. *Clinical Professor of Dentistry*

D.D.S., Columbia, 1926; B.S., New York University, 1935; M.A., 1938

Robin M. Rankow. *Assistant Clinical Professor of Oral Surgery*

D.D.S., Columbia, 1940; M.D., Rochester, 1950

Fred Rothenberg. *Assistant Clinical Professor of Dentistry*

D.M.D., Goettingen, Germany, 1935; D.D.S., Pennsylvania, 1937

William J. Savoy. *Clinical Professor of Dentistry*

B.S., Manhattan, 1931; D.D.S., Columbia, 1935

David Tanchester. *Clinical Professor of Dentistry (at Montefiore Hospital)*

D.D.S., New York University, 1921

ORTHODONTICS

Nicholas A. Di Salvo. *Professor of Dentistry; Director of the Division*

B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1952

Charles M. Chayes. *Assistant Clinical Professor of Dentistry*

A.B., New York University, 1937; D.D.S., Columbia, 1941

Harold P. Cobin. *Assistant Clinical Professor of Dentistry*

B.S., St. John's (Annapolis), 1927; D.D.S., Columbia, 1931

Harry A. Galton. *Clinical Professor of Dentistry*

D.D.S., Columbia, 1932

Francis J. Loughlin. *Assistant Clinical Professor of Dentistry*

D.D.S., New York University, 1939

Henry I. Nahoum. *Assistant Clinical Professor of Dentistry*

A.B., Brooklyn, 1940; D.D.S., Columbia, 1943

Armand Oppenheimer. *Assistant Clinical Professor of Dentistry*

A.B., College of the City of New York, 1926; B.S., Columbia, 1927; D.D.S., 1929

Laszlo Schwartz. *Clinical Professor of Dentistry*

B.S., College of the City of New York, 1927; D.D.S., Columbia, 1931

Walter G. Spengeman. *Assistant Clinical Professor of Dentistry*

A.B., Columbia, 1938; D.D.S., Columbia, 1941

Julius Tarshis. *Assistant Clinical Professor of Dentistry*

D.D.S., Pennsylvania, 1949

Clifford L. Whitman. *Clinical Professor of Dentistry*

D.D.S., Maryland, 1927

PATHOLOGY

Donald G. McKay. *Delafield Professor of Pathology; Chairman of the Department*

A.B., California, 1943; M.D., 1945

Lester R. Cahn. *Associate Professor of Oral Pathology*

D.D.S., New York College of Dentistry, 1918

PEDODONTICS

Solomon N. Rosenstein. *Professor of Dentistry; Director of the Division*

B.S., College of the City of New York, 1929; D.D.S., Columbia, 1930

Jerry A. Adelson. *Assistant Clinical Professor of Dentistry*

A.B., Pennsylvania, 1944; D.D.S., New York University, 1951

Julian Schroff. *Assistant Clinical Professor of Dentistry*

B.S., College of the City of New York, 1930; D.D.S., Columbia, 1934

William A. Verlin. *Assistant Clinical Professor of Dentistry*

D.D.S., Columbia, 1931

PHARMACOLOGY

Harry B. van Dyke. *David Hosack Professor of Pharmacology; Chairman of the Department*

B.S., Chicago, 1918; Ph.D., 1921; M.D., Rush, 1923

Herbert J. Bartelstone. *Assistant Professor of Pharmacology*

B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1960

Frederick G. Hofmann. *Assistant Professor of Pharmacology*

A.B., Michigan, 1943; Ph.D., Harvard, 1952

Wilbur H. Sawyer. *Associate Professor of Pharmacology*

M.D., Harvard, 1945; Ph.D., 1950

Shih-Chun Wang. *Professor of Pharmacology*

B.S., Yenching, 1931; M.D., Peiping Union Medical College, 1935; Ph.D., Northwestern, 1940

PHYSIOLOGY

Magnus I. Gregersen. *John C. Dalton Professor of Physiology; Chairman of the Department*

A.B., Stanford, 1923; M.A., 1924; Ph.D., Harvard, 1930

Shu Chien. *Assistant Professor of Physiology*

M.B., National Taiwan, 1954; Ph.D., Columbia, 1957

Louis J. Cizek. *Associate Professor of Physiology*

B.S., Fordham, 1937; M.D., Columbia, 1941

Robert J. Dellenback. *Assistant Professor of Physiology*

A.B., California (Los Angeles), 1950; M.A., 1953; Ph.D., 1955

Werner R. Loewenstein. *Associate Professor of Physiology*

B.A., Chile, 1945; D.M.D., Chile, 1950

William L. Nastuk. *Professor of Physiology*

B.S., Rutgers, 1939; Ph.D., 1945

Mero Nocenti. *Assistant Professor of Physiology*

A.B., West Virginia, 1951; M.S., 1952; Ph.D., Rutgers, 1955

Walter S. Root. *Professor of Physiology*

B.S., Wesleyan, 1924; Ph.D., Pennsylvania, 1930

William W. Walcott. *Associate Professor of Physiology*

A.B., Yale, 1933; Ph.D., Columbia, 1944

PSYCHIATRY

Lawrence C. Kolb. *Professor of Psychiatry; Chairman of the Department*

M.D., Johns Hopkins, 1934

James P. Cattell. *Assistant Clinical Professor of Psychiatry*

A.B., Miami, 1938; M.D., Harvard, 1942

PUBLIC HEALTH

Ray E. Trussell. *Joseph R. De Lamar Professor of Administrative Medicine; Associate Dean (Public Health) of the Faculty of Medicine*

A.B., Iowa, 1936; M.D., 1941; M.P.H., Johns Hopkins, 1947

Arthur Bushel. *Adjunct Associate Professor of Dental Public Health Practice*

A.B., Brooklyn, 1940; D.D.S., Columbia, 1943; M.P.H., 1947

John W. Fertig. *Professor of Biostatistics*

A.B., Ursinus, 1931; Ph.D., Minnesota, 1935

Leonard J. Goldwater. *Professor of Occupational Medicine*

A.B., Michigan, 1924; M.D., New York University, 1928; Med.Sc.D., Columbia, 1937; M.S., 1941

Alvin R. Jacobson. *Associate Professor of Sanitary Sciences*

B.S., North Dakota, 1935; M.S., 1937; Ph.D., Iowa, 1941

George Rosen. *Professor of Public Health Education*

B.S., College of the City of New York, 1930; M.D., Berlin, 1935; Ph.D., Columbia, 1944; M.P.H., 1947

RESTORATIVE DENTISTRY

- Gilbert P. Smith. *Professor of Dentistry; Director of the Division; Dean of the Faculty*
D.D.S., Minnesota, 1927
- Howard A. Arden. *Associate Professor of Dentistry*
B.S., Fordham, 1943; D.D.S., Columbia, 1946
- Herbert D. Ayers, Jr. *Associate Clinical Professor of Dentistry*
A.B., Columbia, 1929; D.D.S., 1931
- James W. Benfield. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1945
- Sebastian A. Bruno. *Assistant Clinical Professor of Dentistry*
D.M.D., Tufts, 1948
- Stanislaw H. Brzustowicz. *Assistant Clinical Professor of Dentistry*
B.S., St. John's, 1940; D.D.S., Columbia, 1943
- Edward A. Cain, Jr. *Professor of Dentistry*
B.S., Fordham, 1942; D.D.S., Columbia, 1945
- Louis A. Cohn. *Associate Clinical Professor of Dentistry*
D.D.S., Pennsylvania, 1928
- Joseph C. De Lisi. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1952
- Joseph E. Fiasconaro. *Assistant Clinical Professor of Dentistry**
D.D.S., Columbia, 1943
- Herbert P. Fritz. *Assistant Clinical Professor of Dentistry*
B.S., New York University, 1933; D.D.S., Columbia, 1936
- Robert E. Herlands. *Professor of Dentistry*
A.B., Columbia, 1941; D.D.S., 1944
- George W. Hindels. *Associate Clinical Professor of Dentistry*
M.D., Vienna, 1938; D.D.S., Columbia, 1943
- Irvin L. Hunt, Jr. *Associate Professor of Dentistry*
D.D.S., Pennsylvania, 1929
- Joseph M. Leavitt. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1940
- George F. Lindig. *Associate Clinical Professor of Dentistry*
D.D.S., Minnesota, 1924
- John J. Lucca. *Associate Professor of Dentistry*
A.B., New York University, 1941; D.D.S., Columbia, 1947
- William Miller. *Assistant Clinical Professor of Dentistry*
B.S., Columbia, 1927; D.D.S., 1931
- William J. Miller. *Associate Clinical Professor of Dentistry*
A.B., New York University, 1940; D.D.S., Columbia, 1943
- Irving J. Naidorf. *Assistant Clinical Professor of Dentistry*
B.A., New York University, 1937; D.D.S., Columbia, 1941
- Max A. Pleasure. *Associate Clinical Professor of Dentistry*
D.D.S., Pennsylvania, 1928; M.S., Columbia, 1941

* On leave, 1960-1961.

Thomas W. Portway. *Assistant Professor of Dentistry*
B.S., Fordham, 1950; D.D.S., Columbia, 1956

Harold Sherman. *Assistant Clinical Professor of Dentistry*
B.S., College of the City of New York, 1935; D.D.S., Michigan, 1946

William H. Silverstein. *Associate Clinical Professor of Dentistry*
D.D.S., Maryland, 1937

Ennio L. Uccellani. *Assistant Professor of Dentistry*
B.S., College of the City of New York, 1946; D.D.S., Columbia, 1948

STOMATOLOGY

Edward V. Zegarelli. *Edwin S. Robinson Professor of Dentistry; Director of the Division*
A.B., Columbia, 1934; D.D.S., 1937; M.S., Chicago, 1943

Frank E. Beube. *Clinical Professor of Dentistry*
L.D.S., D.D.S., Toronto, 1930

Jack Budowsky. *Associate Clinical Professor of Dentistry*
D.D.S., Columbia, 1943

Joseph A. Cuttita. *Associate Professor of Dentistry*
A.B., Fordham, 1932; M.S., 1935; D.D.S., Columbia, 1939

Lewis Fox. *Associate Clinical Professor of Dentistry*
D.D.S., Maryland, 1927

Robert Gottsegen. *Associate Clinical Professor of Dentistry*
A.B., Michigan, 1939; D.D.S., Columbia, 1943

Leonard Hirschfeld. *Associate Clinical Professor of Dentistry*
A.B., Columbia, 1941; D.D.S., 1944

Ellen N. Hosiosky. *Assistant Clinical Professor of Dentistry*
D.M.D., Basle, Switzerland, 1935; D.H., Guggenheim Dental Clinic, 1939; D.D.S., Columbia, 1947

Austin H. Kutscher. *Assistant Professor of Dentistry*
B.S., New York University, 1945; D.D.S., Columbia, 1946

Irwin D. Mandel. *Associate Clinical Professor of Dentistry*
B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945

Melvin L. Morris. *Associate Clinical Professor of Dentistry*
B.S., College of the City of New York, 1934; M.A., Columbia, 1937; D.D.S., 1941

Ferdinand A. Tuoti. *Assistant Clinical Professor of Dentistry*
D.M.D., Harvard, 1928

RESEARCH ASSOCIATES

Carlos J. Dalmau, M.D. (*Psychiatry*)
Sidney L. Horowitz, D.D.S.
Herbert F. Silvers, D.D.S.
George Stein, M.D., D.M.D.
Benjamin Tenenbaum, D.D.S.

INSTRUCTORS

Lionel Abzug, D.D.S.
Seymour Albus, D.D.S.

INSTRUCTORS (*continued*)

Julian W. Anderson, D.D.S.
Martin Blank, Ph.D. (*Physiology*)
Harold D. Baurmash, D.D.S.
Marc L. Berg, D.D.S.
Charles L. Berman, D.D.S.
Jack M. Breuer, D.D.S.
Pandelis Camesas, D.D.S.
Victor S. Caronia, D.D.S.
Kenneth C. Deesen, D.D.S.

INSTRUCTORS (*continued*)

Elizabeth C. Gerst, Ph.D.
(Physiology)
 Herman Gladstone, M.D. (*Anatomy*)
 Benjamin W. Glick, M.D.
(Anatomy)
 Monroe M. Gliedman, D.D.S.
 Richard Gliedman, D.D.S.
 Ida M. Golomb, D.D.S.
 Stanley S. Heller, D.D.S.
 H. Curtis Hester, D.D.S.
 Norman H. Joondeph, D.D.S.
 Mortimer Karmioli, D.D.S.
 Edward P. Kessler, D.D.S.
 George Kiriakopoulos, D.D.S.
 Seymour Koster, D.D.S.
 Philip Kutner, D.D.S.
 Henry P. Levy, D.D.S.
(Anatomy)
 Evald Linder (*Dental Technic*)
 Julius G. Littman, M.D.
(Anatomy)
 Louis J. Loscalzo, D.D.S.
 Joseph Luban, D.D.S.
 George V. Lyons, D.D.S.
 Louis Mandel, D.D.S.
 Lawrence Marder, D.D.S.
 George A. Minervini, D.D.S.
 Bernard Nathanson, D.D.S.
 Herbert I. Oshrain, D.D.S.
 John D. Piro, D.D.S.
 Arnold Rosenberg, D.D.S.
 Bert B. Schoeneman, D.D.S.
 Janice Schreiber, D.D.S.
 Murray Schwartz, D.D.S.
 Steven Scrivani, D.D.S.
 Joseph Serio, D.D.S.
 Boaz Shattan, D.D.S.
 Alvin L. Solomon, D.D.S.
 Eugene M. Tedaldi, D.D.S.
 Edward E. Teltsch, D.D.S.
 Robert F. Walsh, D.D.S.
 Bernard H. Wasserman, D.D.S.
 Issacher Yavelow, D.D.S.

ASSISTANTS

Paul I. Addison, D.D.S.
 Mark L. Benes, D.D.S.
 Gerald H. Besen, D.D.S.
 Abraham M. Blechman, D.D.S.
 David Blistein, D.D.S.
 Morton S. Brod, D.D.S.
 Marvin Firdman, D.D.S.
 Russell R. Garofalo, D.D.S.
 Albert Green, D.D.S.
 Jacob I. Kaplan, D.D.S.
 Robert J. Kelley, D.D.S.
 Marvin B. King, D.D.S.
 Robert G. Kroll, D.D.S.*
 Eugene F. Murphy, D.D.S.
 Solomon Snyder, D.D.S.
 Agate Suurkivi, D.D.S.
 Russell J. Vanacek, D.D.S.

LECTURERS

Carlisle C. Bastian, D.D.S.
 Bernard S. Chaikin, D.M.D.
 Robert M. Cole, D.D.S.
 William R. Donovan, M.D.
(Public Health)
 Robert L. Fisher, D.D.S.
 Henry M. Goldman, D.M.D.
 Joseph E. Johnson, D.D.S.
 Saul Misheloff, D.D.S.
 Bissell B. Palmer, D.D.S.
(Public Health)
 Arnold C. Rosenberg, D.D.S.

CURATOR OF THE MUSEUM

Curt Proskauer, D.M.D.

RESEARCH ASSISTANTS

Robert J. Huettner, D.D.S.
 Solomon L. Katz, D.D.S.
 Hans H. Neumann, M.D.

* On leave, 1960-1961.

► PRESBYTERIAN HOSPITAL DENTAL SERVICE

DIRECTOR: Gilbert P. Smith

CONSULTANTS: Adolph Berger, Bion R. East, Houghton Holliday, Carl R. Oman,
Joseph Schroff, Albin R. Seidel

DIAGNOSTIC SERVICE

Attending Dental Surgeon: Edward V. Zegarelli

Associate Attending Dental Surgeon: Joseph A. Cuttita

Assistant Attending Dental Surgeons: Jack Budowsky, Austin H. Kutscher, Laszlo Schwartz

ORAL SURGERY SERVICE

Attending Dental Surgeon: William J. Savoy

Associate Attending Dental Surgeon: Alvin S. Nathan

Assistant Attending Dental Surgeons: Kourken A. Daglian, Boaz Shattan

OPERATIVE DENTISTRY SERVICE

Associate Attending Dental Surgeon: Edward A. Cain, Jr.

Assistant Attending Dental Surgeon: Thomas W. Portway

PATHOLOGICAL SERVICE

Associate Attending Dental Surgeon: Lester R. Cahn

PEDODONTIC SERVICE

Attending Dental Surgeon: Solomon N. Rosenstein

PERIODONTIA SERVICE

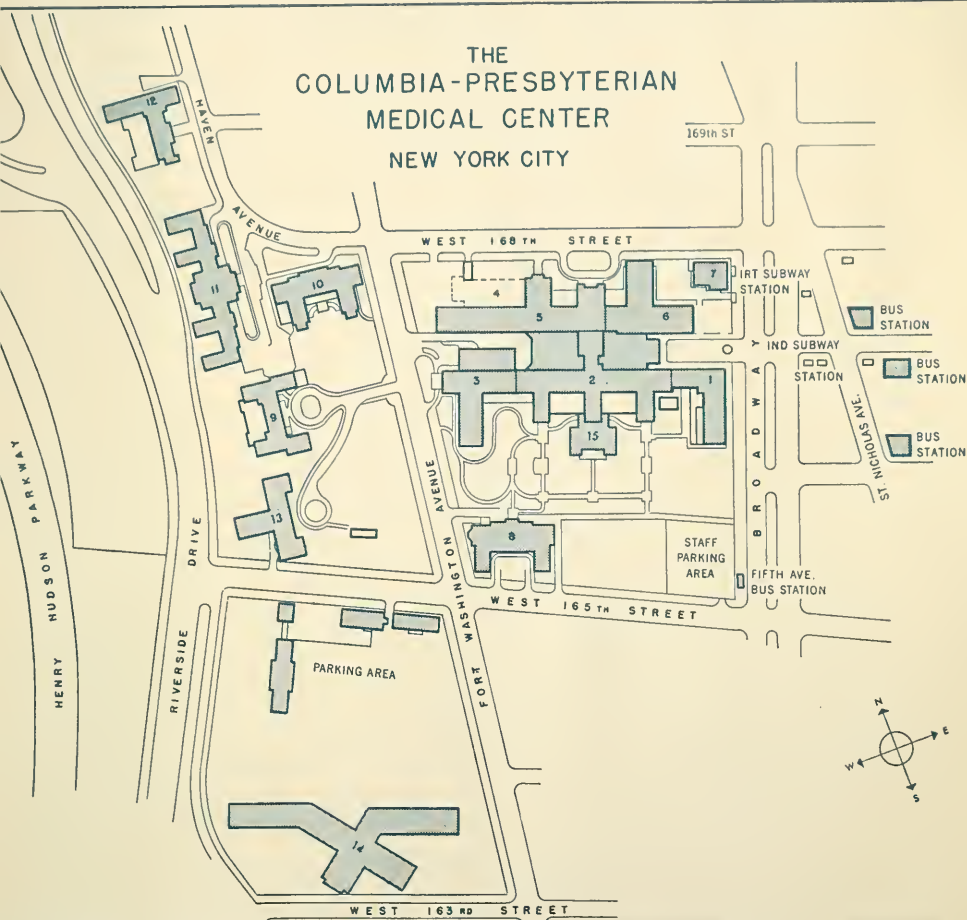
Assistant Attending Dental Surgeon: Frank E. Beube

PROSTHODONTIC SERVICE

Attending Dental Surgeon: Gilbert P. Smith

Assistant Attending Dental Surgeons: Howard A. Arden, Sebastian A. Bruno,
Robert E. Herlands, Ennio L. Uccellani

THE
COLUMBIA-PRESBYTERIAN
MEDICAL CENTER
NEW YORK CITY



- | | |
|---|---|
| 1. BABIES HOSPITAL | 7. N. Y. CITY DEPT. OF HEALTH
SCHOOL OF PUBLIC HEALTH AND
ADMINISTRATIVE MEDICINE |
| 2. PRESBYTERIAN HOSPITAL
N. Y. ORTHOPAEDIC HOSPITAL
SLOANE HOSPITAL
SQUIER UROLOGICAL CLINIC | 8. INSTITUTE OF OPHTHALMOLOGY |
| 3. HARKNESS PAVILION | 9. MAXWELL HALL |
| 4. POWER HOUSE | 10. NEUROLOGICAL INSTITUTE |
| 5. COLLEGE OF PHYSICIANS AND SURGEONS | 11. N. Y. STATE PSYCHIATRIC INSTITUTE |
| 6. VANDERBILT CLINIC
SCHOOL OF DENTAL AND ORAL SURGERY | 12. BARD HALL |
| | 13. HARKNESS MEMORIAL HALL |
| | 14. FRANCIS DELAFIELD HOSPITAL, N.Y.C. |
| | 15. PAULINE A. HARTFORD MEMORIAL CHAPEL |

Columbia University Bulletin

SERIES 61

NUMBER 30

JULY 29, 1961



School of Dental and Oral Surgery

1961-1962

Academic Calendar, 1961-1962

Sept	5-6	Tuesday-Wednesday. Registration, including payment of fees. Later registration requires payment of a late fee.
	7	Thursday. Freshman Orientation Program.
	11	Monday. Classes begin.
Nov	7	Tuesday. Election Day. Holiday.
	23	Thursday. Thanksgiving Day. Holiday.
	25	Saturday. First trimester ends.
	27	Monday. Second trimester begins.
Dec	18	Monday, through January 1, 1962, Monday. Christmas Holidays.
Feb	22	Thursday. Washington's Birthday. Holiday.
	24	Saturday. Second trimester ends.
	26	Monday. Third trimester begins.
Mar	1	Thursday. Last day for filing application or renewal of application for all degrees and certificates to be awarded in June. Later filing of application requires payment of a late fee.
Apr	16	Monday, through April 22, Sunday. Easter Holidays.
May	1	Tuesday. Last day for filing <i>late</i> application for June degrees.
	19	Saturday. Third trimester ends.
	21-25	Monday-Friday. Final examinations.
	30	Wednesday. Memorial Day. Holiday.
June	6	Tuesday. Award of degrees and certificates.

Columbia University in the City of New York

School of
Dental
and
Oral Surgery

1961-1962

The Faculty of Dental and Oral Surgery

Grayson Kirk, Ph.D., LL.D. *President of the University*

John A. Krout, Ph.D., L.H.D. *Vice President of the University*

Jacques Barzun, Ph.D. *Dean of Faculties and Provost of the University*

H. Houston Merritt, M.D. *Vice President in Charge of Medical Affairs*

Gilbert P. Smith, D.D.S. *Dean*

Howard A. Arden, D.D.S. *Associate Professor of Dentistry*

Frank E. Beube, L.D.S., D.D.S. *Clinical Professor of Dentistry*

Edward A. Cain, Jr., D.D.S. *Professor of Dentistry*

Wilfred M. Copenhaver, Ph.D. *Professor of Anatomy*

Joseph A. Cuttita, D.D.S. *Associate Professor of Dentistry*

Nicholas A. Di Salvo, D.D.S., Ph.D. *Professor of Dentistry*

Rudolph H. Friedrich, D.D.S. *Professor of Dentistry*

Harry A. Galton, D.D.S. *Clinical Professor of Dentistry*

Magnus I. Gregersen, Ph.D. *Dalton Professor of Physiology*

Robert E. Herlands, D.D.S. *Professor of Dentistry*

John J. Lucca, D.D.S. *Associate Professor of Dentistry*

Donald G. McKay, M.D. *Delafield Professor of Pathology*

David Rittenberg, Ph.D. *Professor of Biochemistry*

Harry M. Rose, M.D. *John E. Borne Professor of Microbiology*

Solomon N. Rosenstein, D.D.S. *Professor of Dentistry*

William J. Savoy, D.D.S. *Clinical Professor of Dentistry*

Laszlo Schwartz, D.D.S. *Clinical Professor of Dentistry*

Frances A. Stoll, Ed.D. *Professor of Dental Hygiene*

Harry B. van Dyke, Ph.D., M.D. *Hosack Professor of Pharmacology*

Edward V. Zegarelli, D.D.S. *Edwin S. Robinson Professor of Dentistry*

Objectives of the School

Columbia University founded the School of Dental and Oral Surgery in 1916 with the conviction that dentistry is an integral part of the health sciences and that dental education is a true university discipline. These beliefs have prevailed through the School's history and are presently reaffirmed. Many departments of the University contribute to and collaborate in the education of the dental student, thereby assuring him a broad foundation for sound professional development. The guiding educational policy of Columbia University is a constant pursuit of excellence. The primary goal of the School of Dental and Oral Surgery is the preparation of dentists who will fulfill their obligations to the individual, to society, and to the profession.

The curriculum reflects the realization that adequate preparation for dentistry demands both an understanding of biological principles and the development of clinical skills, and that each is dependent upon the other if optimal dental service is to be assured. The correlation of biological knowledge with clinical practice is reinforced throughout the program by both basic-science and clinical instruction. Emphasis is placed upon the close relationship between systemic and oral health and disease, on systemic aberrations that affect the oral structures, on diseases of the mouth which may affect other organ systems, and upon dental health as an essential to total health.

Clinical training, which is broad in scope and of great importance, is designed to produce competence in the recognition of oral disease and disorder, to develop skill in the planning and execution of treatment, to establish the concept of maintaining the oral structures in optimal health, and to stress the essential role of prevention in the control of oral disease.

Although learning plays a vital role in the student's life, his future development and attainment can be assured most effectively by fostering a spirit of inquiry. Accordingly, there is constant application of the scientific method, and both undergraduate and postgraduate students are encouraged to participate in research.

Because the child population is rapidly increasing, knowledge of the processes of human growth and development and of prevention of disease and abnormality must be amplified. In medicine, prevention of disease has resulted in extensive reduction in infant and child mortality and in a marked increase in the life span of the individual. In dentistry, prevention of dental and oral disease and disorder must be effected in childhood to eliminate dental mortality and enable our youth to attain adulthood with complete, healthy dentitions and socially acceptable speech and expression. The increased life span presents many new physiological and pathological problems which are peculiar to the aged and are open to investigation. Programs in graduate education and research are essential if we are to meet these challenges to dentistry. The School of Dental and Oral Surgery regards high standards in both graduate education and research as prime objectives.

Foresight on the part of the founders of the School of Dental and Oral Surgery provided for the education of auxiliary personnel to augment dental health services.

The Courses for Dental Hygienists was established in the same year that the School became part of the University. Further exploration is planned in the use of auxiliary personnel to increase efficiency and to provide additional services for the growing population.

Columbia University has realized that to accomplish these objectives requires the selection of students with superior abilities and academic qualifications, excellent teaching, and constant pursuit of knowledge through an active and diversified research program. Conscious of these needs, the School of Dental and Oral Surgery has selected its students with care and has maintained classes of small size with a favorable ratio of students to staff. This permits individual instruction and an inspiring relationship between student and teacher. The School has, through the years, enjoyed a staff of distinguished teachers who have demonstrated accomplishment in education, research, and professional leadership. Thus, a sound background and training enable the Columbia graduate to meet the oral health requirements of the nation, to interpret the needs of the future, and to assume leadership in the various areas of professional and community activities.

► PROGRAM OF STUDY

The Columbia program in dentistry requires four academic years to complete and leads to the degree of Doctor of Dental Surgery. The aim of the curriculum is to enable the student to acquire a knowledge of the fundamental sciences in relation to dentistry and of the techniques of solving dental problems. The first two years are devoted to a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, and physiology, along with the fundamentals of operative and prosthetic dentistry, oral surgery, periodontology, and psychiatry. The student thereby prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skill required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by the division of classes into small sections, by conferences, and by the comprehensive case method of instruction.

The student's voluntary participation in research projects of his own choosing and in programs under the guidance of the faculty is earnestly encouraged. Members of the William Jarvie Society for Dental Research, the undergraduate research and honor society, undertake individual and team projects under the direction of members of the faculty. Lectures on the principles and practice of research are provided for the membership. In addition, students assist in the execution of studies being pursued by faculty members. A limited number of student research fellow-

ships are available for summer work under the direction of the staff. The scope of student research includes critical reviews of the literature, clinical studies in the techniques of the various disciplines of dentistry, and the evaluation of newer therapeutic agents and dental materials. Work in the basic sciences is encouraged.

The administrative offices and the clinical and research facilities of the School of Dental and Oral Surgery occupy three floors of the Vanderbilt Clinic wing of the Columbia-Presbyterian Medical Center, one of the great institutions of its kind in the East.

THE DENTAL CLINIC

The School benefits in many ways by its association with the Medical Center. One of the functions of its clinic is the dental care of patients in the Center's hospitals. Dental students are given a unique opportunity to gain experience in the diagnosis and care of those cases where a relationship exists between oral and general systemic diseases. The student also learns at first hand the problems of providing dental care for the hospitalized patient. The wards and outpatient departments of the Center give close contact and association with all branches of the health services.

THE LIBRARY

The Medical Library occupies parts of the three lower floors in the College of Physicians and Surgeons. It provides current literature, both books and journals, for faculty and students, and it aids in research through its own collection of current and historical works and through its unique bibliographic service.

► POSTGRADUATE TRAINING

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1961-1962 short refresher courses will be offered in various subjects. Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses.

The School is also authorized to grant certificates of training in special branches of dentistry. Study for the certificate of training includes special work in the clinical and basic science branches of dentistry approved by the Dean. At present, a sixteen-month course is offered to qualify graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, periodontology, and prosthodontics.

For further information see the bulletin of Postgraduate Courses for Dentists, which may be obtained from the Admissions Office, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in

the following basic science departments of the University: anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the bulletin of the Graduate Faculties, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N.Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Director, School of Public Health and Administrative Medicine, 600 West 168th Street, New York 32, N.Y.

► COURSES FOR DENTAL HYGIENISTS

Columbia offers two programs of study in dental hygiene. The program for the Bachelor of Science degree includes a minor in public health; it also offers the subjects required by New York State for a permanent dental hygiene teacher's license. The purpose of the program is to give students the wide range of professional experience available in a large medical center, to perfect dental health techniques, and to provide these educational experiences in an ethical environment. Advanced education leading to the Master of Science degree is provided for those who wish to teach dental hygiene or to fill administrative or supervisory posts in other university schools for dental hygienists. The programs are open only to women.

For a special bulletin describing the programs of study address the Director, Courses for Dental Hygienists, 630 West 168th Street, New York 32, N.Y.

Courses of Instruction

The University reserves the right to withdraw or modify the courses of instruction or to change the instructors at any time.

ANATOMY

Anatomy 115. Oral microscopic anatomy and embryology

Professor Applebaum and staff. First year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150. Microscopic anatomy

Professor Copenhaver and staff. First year.

Lectures, conferences, and laboratory.

This course is the same as *Anatomy 101F* in the Medical School.

Anatomy 151. Gross anatomy

Professors Moss and Rogers, and staff. First year.

Regional dissections of the complete body are augmented by lectures stressing *functional* interpretations. The course is oriented to the basic principles of human biology, with emphasis on pertinent anthropological and clinical topics.

Anatomy 152. Embryology

Professor Copenhaver and staff. First year.

Lectures and demonstrations correlating developmental anatomy with gross anatomy and with microscopic anatomy.

Anatomy 153. Neuroanatomy

Professors Carpenter and Noback, and assistants. First year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to *Anatomy 106S* in the Medical School.

Anatomy 171. Statistics and genetics

Interdepartmental course. Second year.

Lectures and demonstrations.

Anatomy 252. Functional anatomy of the head and neck

Professors Moss and Rankow. Third year.

A concise review of the functional interrelationships in this region and their dynamic significance. Pertinent clinical topics are analyzed from this viewpoint.

BIOCHEMISTRY

Biochemistry 150. Principles of biochemistry

Professors Eisenberg and Gillespie. First year.

A study of the chemical constitution of natural products and their metabolism to yield cellular constituents and the energy requirements of the mammalian cell.

MEDICINE**Medicine and Casualty Care 278 and 279. General survey of medicine; casualty care in civil defense**

Professor Rankow and members of the Presbyterian Hospital staff. Third and fourth years.

The cardinal manifestations of disease are reviewed from the differential diagnostic point of view. The disorders of the various organ systems as well as those resulting from endocrine and metabolic dysfunction are studied. Emergency measures are presented for management of the casualties in civil defense.

MICROBIOLOGY**Microbiology 151. General medical microbiology and immunology**

Professor Ellison. Second year.

Laboratory and conferences.

Microbiology 152. Principles of microbiology, immunology, and epidemiology

Professor Ellison. Second year.

This course is similar to *Microbiology 105F* in the Medical School. Lectures on oral microbiology are substituted for several of those of the medical series.

ORTHODONTICS**Orthodontics 241. Principles of orthodontics**

Professor Di Salvo and staff. Third year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and construction of fixed and removable appliances used as space maintainers. In addition, simple appliances used in tooth guidance procedures, which are considered to be within the province of the general practitioners of dentistry, are constructed.

Orthodontics 242. Orthodontic clinic

Professor Di Salvo and staff. Fourth year.

Students obtain clinical experience in the use of appliances constructed in the laboratory. They treat patients with orthodontic problems which require either preventive measures or minor tooth movement.

PATHOLOGY**Pathology 150. General and special pathology**

Professor McKay and staff. Second year.

Lectures, demonstrations, and laboratory work designed to give the student a comprehensive understanding of the mechanisms of disease. Special emphasis is placed on general pathology and on disorders of the respiratory, cardiovascular, and osseous systems.

Pathology 246. Oral pathology

Professor Cahn and staff. Second year.

Lectures, demonstrations, conferences, and laboratory work on diseases of the jaws, teeth, and soft tissues about the oral cavity.

Pathology 247. Oral pathology seminar

Professor Cahn. Fourth year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS**Pedodontics 201. Preventive dentistry**

Professor Rosenstein. Fourth year.

Lectures on the principles of prevention of dental and oral disease and disorders in children: dental caries, the common oral soft-tissue lesions, disorders of occlusion in the developing dentitions, and elimination of unfavorable habits involving the mouth. Constitutional and systemic factors (including nutrition) are included, as well as local oral factors. In each of these areas specific recommendations are made for clinical application of positive preventive measures. Pertinent literature is assigned and reviewed.

Pedodontics 202. Theory and practice of pedodontics

Professor Rosenstein. Fourth year.

Lectures and conferences on the factors involved in basic treatment planning for children and requisite background knowledge: anatomical details of deciduous teeth, clinical aspects of the various stages of dental development, child evaluation and management, purposes and essentials of pedodontic history taking, home care, special operative procedures for conservation of children's teeth, management of traumatized teeth, and special considerations in dental care for children with handicapping conditions.

Pedodontics 203. Pedodontics technique

Professor Rosenstein and staff. Fourth year.

Demonstration and technique exercises in special operative procedures for compound-cavity preparation and filling, and full-crown coverage for deciduous teeth on technique models using newer types of cutting instruments.

Pedodontics 204. Pedodontics clinic

Professor Rosenstein and staff. Fourth year.

Clinical practice in management of the child dental patient and application of the principles and procedures presented in the lecture courses: history taking, prophylaxis, and special operative procedures for prevention of premature loss of children's teeth. Application of knowledge of dental development and preventive dentistry is emphasized in evaluation of the child dental patient and in treatment planning.

PERIODONTOLOGY**Periodontology 151. Periodontia lectures, seminars, and clinic**

Professor Beube and staff. Second year.

Lectures and seminars in the diagnosis, etiology and treatment of periodontal diseases. Clinical practice in periodontal examination, prescribing dental prophylaxis, subgingival curettage, and oral hygiene.

Periodontology 251. Periodontia lectures, seminars, and clinic

Professor Beube and staff. Third year.

Lectures and seminars on periodontal surgery, occlusal traumatism, selective tooth grinding, and temporary splinting. Clinical practice in subgingival curettage, selective tooth grinding, wire ligation, and standard periodontal surgical techniques.

Periodontology 252. Periodontia lectures and seminars

Professor Beube and staff. Fourth year.

Lectures and seminars on the history of treatment methods, special problems in periodontal surgery, fixed splinting, periodontal histology and histopathology, and treatment-planning.

Periodontology 253. Periodontia clinic

Professor Beube and staff. Fourth year.

Continuation of *Periodontology 251* and advanced periodontal surgical techniques.

PHARMACOLOGY**Pharmacology 150. Introduction to pharmacology**

The staff. Second year.

By means of the lectures in this course, the student is introduced to a wide variety of drugs. The effects of many of these drugs on man and lower animals are demonstrated in the laboratory. Emphasis is placed upon general pharmacological principles to assist the student in the rational use of drugs and in the evaluation of new remedies as they may be introduced.

PHYSIOLOGY

Physiology 150. Mammalian physiology

Professor Nocenti and staff. First year.

Lectures, conferences, demonstrations, and laboratory. The function of the various organ systems of the mammalian body and their interrelations are studied.

PSYCHIATRY

Psychiatry 150. Psychiatry for the dentist

Professor Cattell. Third year.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH

Public Health 222. Principles of public health

Professor Bushel and staff. Fourth year.

Survey course in the theory and practice of general public health with more detailed discussion of dental public health topics. Included are several background sessions on epidemiology, preventive medicine, and statistics as well as presentations of public health programs at the federal, state, and local levels. Dental public health sessions feature existing programs, dental prepayment, community dental surveys, the dentist and his professional society, and dental health education resources.

RESTORATIVE DENTISTRY

Restorative Dentistry 101. Oral anatomy

Professor Arden and staff. First year.

Lectures on the gross anatomy of the teeth and of the related tissues. Laboratory procedures in the reproduction of individual teeth in wax, the setting up of teeth in occlusion, the restoration of the anatomy of carious teeth in wax, and the macroscopic study of tooth morphology.

Dental Materials 125 and 126. Physical properties of dental materials

Professor Ayers. First and second years.

Lectures and demonstrations relating the action of the restorative and accessory dental materials with the oral tissues in function.

Operative Dentistry 130 and 131. Elements of operative dentistry

Professor Cain and staff. First and second years.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233. Operative clinical practice

Professor Sherman and staff. Third year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234. Advanced clinical practice

Professor Cain and staff. Fourth year.

A continuation in lectures and clinic of *Operative Dentistry 233* with the consideration of special problems in operative practice, including endodontia.

Prosthetics 104 and 105. Crown and fixed partial denture lectures and technique

Professor Arden and staff. First and second years.

Lectures on the technical procedures in crown and fixed partial dentures, with practical application, and the construction of fixed partial dentures and crowns on technique models.

Prosthetics 157. Prosthetic lectures and technique

Professor Arden and staff. Second year.

Lectures and technical procedures in complete and removable partial denture construction.

Prosthetics 205. Crown and fixed partial denture lectures

Professor Herlands. Third year.

Lectures on the clinical procedures in crown and fixed partial dentures.

Prosthetics 206. Crown and fixed partial denture clinic

Professor Herlands and staff. Third year.

Clinical construction of elementary crown and fixed partial dentures.

Prosthetics 210. Crown and fixed partial denture lectures

Professor Herlands. Fourth year.

Lectures and conferences on various types of fixed partial dentures.

Prosthetics 211. Crown and fixed partial denture clinic

Professors Smith and Herlands, and staff. Fourth year.

Clinical construction of crown and fixed partial dentures.

Prosthetics 212. Applied occlusal dynamics

Professor Cohn. Third year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260. Prosthetic lectures

Professors Lucca and Hindels. Third year.

Examination, classification, application of anatomical considerations, and clinical procedure in complete and removable partial denture construction.

Prosthetics 261. Prosthetic clinic

Professor Lucca and staff. Third year.

Clinical demonstrations and instruction in the construction of complete dentures.

Prosthetics 263. Prosthetic clinic

Professors Smith and Lucca, and staff. Fourth year.

Clinical construction of complete and removable partial dentures.

Prosthetics 264. Prosthetic lectures

Professor Lucca. Fourth year.

A series of lectures on clinical and biological considerations in prosthodontic diagnosis, design, and construction.

Prosthetics 265. Surgical prosthesis

Professor Bruno. Fourth year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

STOMATOLOGY**Diagnosis 212. Diagnosis lectures and clinic**

Professors Zegarelli, Cuttita, and Budowsky. Third year.

Lectures on methods of diagnosis, pulp symptomatology, radiographic interpretation, anomalies, and diseases of the mouth and jaws; clinical practice in diagnostic examination and history-taking.

Diagnosis 213. Diagnosis clinic

Diagnosis staff. Fourth year.

Clinical practice in diagnostic procedures and techniques, comprehensive diagnosis including treatment-planning, and clinical and laboratory diagnosis of diseases of the mouth and jaws.

Diagnosis 214. Diagnosis lectures

Professor Zegarelli. Fourth year.

Lectures and discussions on the diseases of the maxilla and mandible and tumors of the mouth; demonstrations of diagnostic techniques.

Diagnosis 215. Diagnosis lectures

Professor Zegarelli and staff. Fourth year.

Lectures and discussions on focal infection, psychosomatics in dentistry, and hemorrhagic diseases of the mouth.

Radiology 267. Radiology lectures and clinic

Professor Budowsky and staff. Third year.

Lectures and discussions on history, physics, and electronics of radiology; studies on radiobiology, radiotherapy, radiation hazards, and protections; clinical practice in intra- and extraoral radiography; demonstrations of temporomandibular joint and laminography techniques.

Therapeutics 286.

Professor Kutscher. Third year.

Lectures, conferences, and clinical experience in the application of the principles of pharmacotherapeutics to general practice. The course is specifically integrated with the lectures of *Diagnosis 212* in regard to indications for therapy, choice of drugs, modes of administration, and side reactions.

SURGERY

Surgery 168A. Local anesthesia

Professor Friedrich and staff. Second year.

Lectures and seminars on the history of anesthesia and pain control in dentistry, the nature and action of local anesthetics, the evaluation of the patient in the selection of drugs, and the anatomy related to and the techniques required in the proper application of local anesthesia to dental practice.

Surgery 168B. Basic exodontia

Professor Baurmash. Second year.

Lectures and demonstrations covering the evaluation, treatment plan, and preparation of the patient for the uncomplicated removal of teeth. The basic principles of tooth movement in exodontia, the related anatomy of the oral cavity, and the procedures for assurance of asepsis.

Surgery 270. Dento-alveolar surgery

Professor Friedrich. Third year.

Lectures, seminars, and clinical practice in the evaluation of the patient, the evaluation of diagnostic data, and the development of the surgical decision; the principles of flap design and the surgical management of the hard and soft tissues of the mouth; the surgical removal of teeth and the surgical procedures related to orthodontics, prosthodontics, endodontics, periodontics, and oral diagnosis.

Surgery 271. Hard- and soft-tissue trauma and dental infections

Professor Loscalzo. Fourth year.

An analysis of the process of dental infection: the influence of anatomic relations in the developmental pattern of infection; the surgical anatomy essential to its proper medical and surgical management; the recognition and diagnosis of fractures of the mandible and maxilla and of related facial fractures; the management of fractures involving occlusion; and clinical practice in oral surgical problems.

Surgery 272. Surgery of associated oral tissues and structures: tumors, cysts, salivary glands, and maxillary sinus

Professor Mandel. Fourth year.

Lectures and seminars on the large segment of surgical problems not associated with exodontia: the differential diagnosis; the development of the surgical decision; the medical and surgical management of problems of the maxillary sinus, benign tumors, salivary glands, and cysts. Attention is also given to the application of the basic sciences in the proper understanding and management of these problems.

Surgery 273. General anesthesia in dental practice

Professor Fierstein and staff. Fourth year.

Lectures and demonstrations on the history of anesthesia in dentistry, pharmacological and physiological pain and patient control in modern dental practice, the management of emergencies in the dental office (from syncope to coronary arrest), and the clinical administration of drugs.

Surgery 274. The dental team in the management of oral, facial, and speech defects

Professor Friedrich and guest lecturers. Fourth year.

Lectures and demonstrations on the necessity for free but coordinated interplay among dental specialties in the rehabilitation of the birth anomalies of the oral cavity, post-neoplastic surgical and post-traumatic conditions, and the biological and psychological problems involved in the treatment planning for their therapy. In addition, guest lecturers from medicine, surgery, and speech therapy present the total management of these problems.

Surgery 275. Seminar and comprehensive examination in oral surgery

Professor Friedrich and staff. Fourth year.

Seminar sessions in which students present the essentials of specific problems in oral surgery as a basis for class discussion. The sessions are attended by several members of the staff who use this opportunity to measure the student's understanding and knowledge of his place in the total complex of surgical care for the patient.

THEORY AND PRACTICE OF DENTISTRY**Theory and Practice 280. Dental ethics, jurisprudence, and practice administration**

Professor Hunt. Third year.

Lectures covering opportunities in the field of dentistry, selecting a location, planning and equipping an office; development of habits leading to personal health and professional success. Introduction to dental ethics and the law relating to dental practice. Handling patients under clinic conditions, and dental records.

Theory and Practice 281. Dental ethics, jurisprudence, and practice administration

Professor Hunt. Fourth year.

Lectures and seminars covering the codes of ethics, intraprofessional relations, areas of legal liability, malpractice, contracts, establishing fees, office procedures, psychology of handling patients and practice-building.

Theory and Practice 283. Clinical oral physiology

Professor Schwartz and staff. Fourth year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and conferences.

Theory and Practice 285. Comprehensive case

The staff. Fourth year.

Each student is assigned a case for which he performs all the dental services: taking of x-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 287. History of dentistry

Professor Schwartz. First year.

This course orients the student to the whole of dentistry through the study of its history. The origins, growth, and trends in the development of the scientific and technical principles of modern dentistry are considered in lectures and conferences. The technique of utilizing the literature of dentistry is described.

Summary of the Program

The letters following the course numbers indicate the trimester in which the course is given: F, first; S, second; T, third.

► FOR THE CLASSES OF 1962 AND 1963

THIRD YEAR (CLASS OF 1963)		<i>Hours</i>	
	<i>Class</i>	<i>Lab/Clin</i>	<i>Total</i>
Anatomy 252T	11		11
Diagnosis 212FST	33	30	63
Medicine and Casualty Care 278T	22	22	44
Operative Dentistry 233FST	22	171	193
Orthodontics 241F	22	50	72
Pathology 246F	11	22	33
Periodontology 251ST	11	91	102
Pharmacology 150FS	55	33	88
Prosthetics 205S	11		11
Prosthetics 206FST		168	168
Prosthetics 212T	22		22
Prosthetics 260FT and 261FST	22	168	190
Psychiatry 150S	11		11
Radiology 267FS	11	14	25
Surgery 270BFST	11	10	21
Theory and Practice 280T	11		11
Therapeutics 286T	22		22
			<hr/> 1,087

FOURTH YEAR (CLASSES OF 1962 AND 1963)		
Diagnosis 213FST		30
Diagnosis 214 and 215FT	33	33
Medicine and Casualty Care 279F	9	9
Operative Dentistry 234FST	22	336
Orthodontics 242FST		14
Pedodontics 202FST	22	91
Periodontology 252FS	22	22
Periodontology 253F		30
Prosthetics 210S	11	11
Prosthetics 211FST		129

	<i>Hours</i>		
	<i>Class</i>	<i>Lab/Clin</i>	<i>Total</i>
Prosthetics 264T	11		11
Prosthetics 261 and 263FST		159	159
Prosthetics 265T	11	19	30
Public Health 222ST	22		22
Surgery 272FST	33	52	85
Surgery 274F	11		11
Theory and Practice 281FS	22		22
Theory and Practice 283F	11		11
Theory and Practice 285FST			
			<hr/> 1,100

► FOR THE CLASSES OF 1964 AND 1965

FIRST YEAR

Anatomy 101ST		123	123
Anatomy 115ST	24	48	72
Anatomy 150FS	42	126	168
Anatomy 151FS	50	223	273
Anatomy 152F	22		22
Anatomy 153S	22	44	66
Biochemistry 150ST	57	114	171
Operative Dentistry 130T	11	22	33
Physiology 150ST	57	130	187
Theory and Practice 287T	11		11
			<hr/> 1,126

SECOND YEAR

Dental Materials 125 and 126FT		55	55
Diagnosis 100T	11		11
Statistics and Genetics 171FS	42		42
Microbiology 151 and 152F	44	88	132
Operative Dentistry 131FST	33	110	143
Pathology 150FST	55	121	176
Pathology 246T	22	44	66
Periodontology 151T		33	33
Pharmacology 150FS	55	33	88
Prosthetics 104, 105, and 205FS	20	157	177
Prosthetics 157ST	13	177	190
Radiology 267T	11	15	26
Surgery 168S	11		11
Surgery 270AT	11		11
			<hr/> 1,161

THIRD YEAR

	<i>Hours</i>		
	<i>Class</i>	<i>Lab/Clin</i>	<i>Total</i>
Anatomy 252T	11		11
Diagnosis 212FST	33	30	63
Medicine and Casualty Care 278T	22	22	44
Operative Dentistry 233FST	22	245	267
Orthodontics 241F	22	50	72
Periodontology 251ST	11	61	72
Prosthetics 205S and 206FST	11	168	179
Prosthetics 212T	22		22
Prosthetics 260, 261, and 263FST	22	168	190
Psychiatry 150S	11		11
Surgery 270BFST	11	10	21
Theory and Practice 280T	11		11
Therapeutics 286T	22		22
			<hr/> 985

FOURTH YEAR

Diagnosis 213FST		30	30
Diagnosis 214 and 215FT	33		33
Medicine and Casualty Care 279F	9		9
Operative Dentistry 234FST	22	336	358
Orthodontics 242FST		14	14
Pedodontics 202FST	22	91	113
Periodontology 252FS	22		22
Periodontology 253F		30	30
Prosthetics 210S	11		11
Prosthetics 211FST		129	129
Prosthetics 264T	11		11
Prosthetics 261 and 263FST		159	159
Prosthetics 265T	11	19	30
Public Health 222ST	22		22
Surgery 272FST	33	52	85
Surgery 274F	11		11
Theory and Practice 281FS	22		22
Theory and Practice 283F	11		11
Theory and Practice 285FST			
			<hr/> 1,100

Admission, Registration and Expenses

Candidates should apply during the academic year preceding that for which they seek admission, on application blanks obtained from the Committee on Admissions, School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application must be accompanied by a check or money order for \$15, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable and is not credited toward tuition.

The State Department of Education has special requirements with which students who are not citizens of the country must comply. Foreign students who wish to apply should communicate with the Dean.

Required preparation: three full years at an acceptable college of arts and sciences, including the following courses required by the State Board of Regents (6 points of each). English composition and literature, physics, biology, inorganic chemistry, and organic chemistry.

Recommended preparation: additional courses in chemistry, advanced courses in biology, courses in mathematics, foreign languages, sociology, history, and the fine and industrial arts.

It is not necessary to complete the academic requirements before applying, but all requirements must be completed before matriculation. The admission of a student depends primarily on his preparation and intellectual capacity, but it also depends upon judgments of his character and health.

DENTAL APTITUDE TESTS

All applicants must take the Dental Aptitude Tests, which are conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

ACCEPTANCE FEE

Within one month after he receives notice of his acceptance, an applicant must notify the Committee on Admissions that he intends to enroll and must send a check or money order for \$200 made payable to Columbia University. If he registers for the term to which he has been admitted, the fee will be credited toward his tuition; if he does not register, the fee will not be refunded.

COMBINED COURSES

With Barnard College. Under the "professional option" plan, students from Barnard College may receive the Bachelor of Arts degree from Barnard after the completion of three years of undergraduate work and the first year in the School of Dental and Oral Surgery. To be eligible for this privilege, before entering the School the student must have completed at Barnard 90 points of academic work (including all specific requirements), a major of 28 points, and the major examination or thesis.

With the School of General Studies. Students from the School of General Studies may exercise the professional option after the completion of 94 points (including all courses prescribed for the Bachelor of Science degree), not less than 64 of which must have been taken at Columbia University.

► REGISTRATION

Before attending classes, students must register in person at the Office of the Registrar on September 5-6, 1961. Registration consists of filling out forms required for University records and paying the fees. Late registration requires the approval of the Dean of the School and the payment of a late fee (see below).

REGULATIONS

Each person whose registration has been completed will be considered a student of the University during the term for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is first registered.

The privileges of the University are not available to any student until he has completed his registration. Since, under the University statutes, payment of fees is part of registration, no student's registration is complete until his fees have been paid. No student is permitted to attend any University course for which he is not officially registered unless he has been granted auditing privileges. No student may register after the stated period unless he obtains the written consent of the proper dean or director.

ATTENDANCE AND LENGTH OF RESIDENCE

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work.

Students are held accountable for absences incurred owing to late enrollment. Any student whose religious duties conflict at any time with academic requirements should apply to his dean or director for an equitable solution.

A student in good standing may, for reasons of weight, be granted a leave of absence by the dean or director of the division of the University in which he is registered.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems proper. The disciplinary authority of the University is vested in the President and, subject to his reserved powers, in the dean of each faculty and the director of the work of each administrative board.

► FEES

Tuition, the comprehensive fee, and the student health service fee are payable each term in advance and as part of registration. If these fees are paid after the last day of registration (see the Academic Calendar), they will not be reduced, and a late fee of \$6.00 will be imposed.

The following fees are prescribed by statute for the full program for one year for a candidate for the D.D.S. degree and are subject to change at any time at the discretion of the Trustees. Fees for a partial program are assessed by the Registrar as provided by the University statutes.

Comprehensive fee	\$ 100.00
Tuition	1,350.00
Student health service fee	50.00
For all full-time students, per academic year (see below)	

APPLICATION FEES AND LATE FEES

Application for admission	\$15.00
Application for each special examination	10.00
For renewal of application for a degree	1.00
For late registration	6.00
For late application, or late renewal of application, for a degree	5.00

FEES FOR REPEATED COURSES

A student who is required to repeat the work for any one year must pay the full tuition.

WITHDRAWAL AND ADJUSTMENT OF FEES

A student who decides to withdraw from the University must notify the Registrar in writing at once. If he is under twenty-one years of age, his parent or guardian must first give consent in writing to the Registrar. He will be given an honorable

discharge provided he is in good academic standing and not subject to discipline. At the Registrar's discretion and according to University policy, he will also be given a proportionate rebate of the tuition fees that he has paid. The rebate will be reckoned from the day on which the Registrar receives the student's written notification of withdrawal. The comprehensive fee, the student health service fee, application fees, late fees, and special fees are not refundable.

STUDENT HEALTH SERVICE FEE

The student health service fee will be used to pay the annual premium of the Associated Hospital Service of New York for hospital insurance and to pay part of the cost of the Student Health Service. Students who already have hospital insurance will not be charged the cost of the premium.

Daily office hours are held by the Student Health Service, Room 2-220, Vanderbilt Clinic. Members of the health service are available to attend ill students if they live near the Medical Center. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under the terms of an insurance policy of the Associated Hospital Service of New York.

RENEWAL OF APPLICATION FOR THE D.D.S. DEGREE

An application for the D.D.S. degree terminates at the next regular time for the issuance of diplomas subsequent to the date of filing, but it may be renewed for a fee of \$1.00 each time that the candidate chooses to come up for consideration.

► ESTIMATED EXPENSES

The approximate cost of attending the School for an academic year of nine months is as follows:

	<i>Average</i>	<i>Minimum</i>
Tuition and fees for a full program	\$1,500.00	\$1,500.00
Room in one of the dormitories	400.00	250.00
Board in a University dining hall	550.00	510.00

In addition each student should budget for such items as clothing, laundry and dry cleaning, travel, dues to organizations, amusements, and sundries. Those who live at home probably spend from \$100 to \$150 for lunches during the year.

BOOKS AND EQUIPMENT

Books. The approximate cost of books will be: in the first year, \$150; in the second year, \$100; in the third year, \$200; in the fourth year, \$45. Book lists are posted for each class during registration week. Books may be purchased from the Medical Center Bookstore on the second floor of the College of Physicians and Surgeons. The store is maintained expressly for the convenience of the students and staff of the Medical Center schools and hospitals.

Instruments and supplies. Each student must buy, from the University, the original package outfit of instruments specified in the official instrument list. Unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. Students may not buy more than is required to complete a case. The approximate cost of instruments is: in the first year, \$700; in the second year, \$950; in the third year, \$400; in the fourth year, \$160. Instruments must be paid for at the beginning of the academic year, but students who can demonstrate their need may borrow from the University or from the National Defense Student Loan Program to defray the cost. These are *estimates*. Students are asked *not* to present checks made out in advance and based upon these figures.

Microscopes. Each student entering the School must provide himself with a microscope approved by the Department of Anatomy. It is recommended that the microscope be of standard make equipped with: (a) quadruple nose piece; (b) Abbe or variable focus condenser; (c) 4x, 10x, 43x objectives; (d) 96x oil immersion lens; (e) 10x wide field eye piece; (f) mechanical stage; (g) attached lamp; (h) carrying case. The cost of a new microscope ranges from \$460 to \$700, and of a reconditioned microscope from \$150 to \$450. A limited number of microscopes are available from the School at a modest rental. Arrangements for approval and for purchase or rental should be made before registration for the opening term.

Lockers. Each entering student is assigned a locker; he must use a combination lock as prescribed by the School.

► FINANCIAL AID

Students may apply for loans and grants through the Dean's Office. New students may file application along with the application for admission. Grants are awarded only in combination with loans; any student who can demonstrate his need is eligible to apply. Application forms are issued by the Dean's Office.

Long-term loans at low interest rates are available from the University for tuition and fees, and under certain circumstances, for living expenses. Students who are United States citizens and residents of states having loan plans (Maine, Massachusetts, New York, and Vermont) are urged to apply to these sources. Federal loan funds are also available. Up to one month before the beginning of the academic year, dental students, along with other students who are concentrating in science, are given special consideration for National Defense Student Loans. To insure an early decision, applications should be filed for the autumn term by September 1; for the spring term by December 1.

Deferred payment of tuition may be arranged through the Marine Midland Time Plan. A brochure describing the details of the Plan is issued by the Dean's Office.

The heavy schedule of the School makes it difficult for students to undertake outside part-time work during the academic year. If at all possible, other financial arrangements should be made.

► HOUSING

Booklets describing the University residence halls and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125 Livingston Hall, Columbia University, New York 27, N.Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. Rates for the academic year are \$250 to \$470 for men and \$285 to \$525 for women. Optional pre-paid board plans are available in the men's residence halls. In Johnson Hall, the residents are required to take breakfast and dinner there at a cost of \$400 for the academic year.

Students who wish to live off campus should write or call at the Registry of Off-Campus Accommodations, 115 Livingston Hall, Columbia University, New York 27, for an information sheet which describes the services rendered by the Registry.

International House, a privately owned student residence near the campus, has accommodations for about five hundred graduate students, both foreign and American. Rates for the academic year are \$375 to \$700. To be eligible for admission a student must be at least twenty-one years old and must be registered for a minimum of twelve points or for a program of full-time research. Address the Committee on Admissions, International House, 500 Riverside Drive, New York 27.

In Woodbridge Hall, at 431 Riverside Drive, are one-bedroom, furnished apartments, which are rented for a twelve-month period to married graduate students. The rates range from \$1,260 to \$1,620 a year, including utilities. For further information and application forms write the Residence Halls Office, 125 Livingston Hall.

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates to relatives and guests of members of the University community.

► LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N.Y. All applications for admission to the examination should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

► STUDENT ORGANIZATIONS

OMICRON KAPPA UPSILON

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity,

was chartered in the School of Dental and Oral Surgery in 1934. The purpose of the fraternity is to recognize and honor a maximum of 12 per cent of the members of the graduating senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

THE WILLIAM JARVIE SOCIETY

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and for which second-, third-, and fourth-year students are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

► REGULATIONS

GRADING SYSTEM

The following grading system is used: A, excellent; B, good; C, fair; F, failure.

REQUIREMENTS FOR PROMOTION

A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the officers of instruction under whom he has studied during the preceding year.

The School reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions of study in the School.

Students are classified for readmission or promotion under the following categories: (1) recommended for advancement; (2) recommended for readmission to the same class; (3) recommended neither for advancement nor for readmission to the same class.

GRADUATION

The degree of Doctor of Dental Surgery will be awarded upon completion of the prescribed curriculum. Diplomas are issued at the times stated in the Academic Calendar.

Officers of Instruction

ANATOMY

Wilfred M. Copenhaver. *Professor of Anatomy; Chairman of the Department*
A.B., Western Maryland, 1921; Ph.D., Yale, 1925

Edmund Applebaum. *Associate Professor of Dental Anatomy*
D.D.S., New York College of Dentistry, 1922

Philip W. Brandt. *Assistant Professor of Anatomy*
A.B., Swarthmore, 1952; M.S., Pennsylvania, 1957; Ph.D., Columbia, 1960

Melvin L. Moss. *Associate Professor of Anatomy*
A.B., New York University, 1942; D.D.S., Columbia, 1946; Ph.D., 1954

Charles R. Noback. *Associate Professor of Anatomy*
B.S., Cornell, 1936; M.S., New York University, 1938; Ph.D., Minnesota, 1942

Robin M. Rankow. *Assistant Clinical Professor of Anatomy*
D.D.S., Columbia, 1940; M.D., Rochester, 1950

William M. Rogers. *Assistant Professor of Anatomy*
B.S., Georgia, 1921; Ph.D., Cornell, 1927

S. C. Shen. *Assistant Professor of Anatomy*
B.S., Yenching University, 1933; Ph.D., Cambridge, England, 1939

George K. Smelser. *Professor of Anatomy*
A.B., Earlham, 1929; Ph.D., Chicago, 1932

BIOCHEMISTRY

David Rittenberg. *Professor of Biochemistry; Chairman of the Department*
B.S., College of the City of New York, 1929; Ph.D., Columbia, 1934

Max A. Eisenberg. *Assistant Professor of Biochemistry*
A.B., Brooklyn, 1938; M.S., New York University, 1941; Ph.D., Duke, 1950

Horace B. Gillespie. *Assistant Professor of Biochemistry*
A.B., Lawrence, 1925; M.S., Illinois, 1926; Ph.D., 1930

MICROBIOLOGY

Harry M. Rose. *John E. Borne Professor of Microbiology; Chairman of the Department*
A.B., Yale, 1928; M.D., Cornell, 1932

Sam M. Beiser. *Associate Professor of Microbiology*
B.S., College of the City of New York, 1942; Ph.D., Columbia, 1951

Solon A. Ellison. *Assistant Professor of Microbiology*
B.S., College of the City of New York, 1942; D.D.S., Columbia, 1946; Ph.D., 1958

Bernard F. Erlanger. *Associate Professor of Microbiology*
A.B., College of the City of New York, 1943; M.A., New York University, 1949; Ph.D., Columbia, 1951

Gabriel C. Godman. *Associate Professor of Microbiology*

A.B., New York University, 1941; M.D., 1944

Calderon Howe. *Associate Professor of Microbiology*

A.B., Yale, 1938; M.D., Harvard, 1942

Elvin A. Kabat. *Professor of Microbiology*

B.S., College of the City of New York, 1932; M.A., Columbia, 1934; Ph.D., 1937

Alice W. Knox. *Assistant Professor of Microbiology*

A.B., Vassar, 1927; Ph.D., Columbia, 1951

Councilman Morgan. *Associate Professor of Microbiology*

B.S., Harvard, 1943; M.D., Columbia, 1946

Beatrice C. Seegal. *Professor of Microbiology*

A.B., California, 1918; M.A., 1921; M.D., Johns Hopkins, 1924

Stuart W. Tanenbaum. *Associate Professor of Microbiology*

B.S., College of the City of New York, 1944; Ph.D., Columbia, 1951

ORAL SURGERY

Rudolph H. Friedrich. *Professor of Dentistry; Director of the Division*

D.D.S., Northwestern, 1930

Harold D. Baumash. *Assistant Clinical Professor of Dentistry*

D.D.S., Columbia, 1948

Theodore M. Bundrant. *Associate Clinical Professor of Dentistry*

D.D.S., Howard, 1929

Kourken A. Daglian. *Assistant Clinical Professor of Dentistry*

B.S., College of the City of New York, 1941; D.D.S., Columbia, 1943

Morris Fierstein. *Associate Clinical Professor of Dentistry*

D.D.S., Columbia, 1921

Bertram Klatskin. *Assistant Clinical Professor of Dentistry*

A.B., Cornell, 1937; D.D.S., Columbia, 1941

Louis J. Loscalzo. *Assistant Clinical Professor of Dentistry*

A.B., Fordham, 1942; D.D.S., Temple, 1946

Louis Mandel. *Assistant Clinical Professor of Dentistry*

A.B., New York University, 1943; D.D.S., Columbia, 1946

George A. Minervini. *Assistant Clinical Professor of Dentistry*

A.B., Columbia College, 1942; D.D.S., Columbia, 1946

Alvin S. Nathan. *Clinical Professor of Dentistry*

D.D.S., Columbia, 1926; B.S., New York University, 1935; M.A., 1938

Fred Rothenberg. *Assistant Clinical Professor of Dentistry*

D.M.D., Goettingen, Germany, 1935; D.D.S., Pennsylvania, 1937

William J. Savoy. *Clinical Professor of Dentistry*

B.S., Manhattan, 1931; D.D.S., Columbia, 1935

David Tanchester. *Clinical Professor of Dentistry (at Montefiore Hospital)*

D.D.S., New York University, 1921

Seymour Zeff. *Assistant Clinical Professor of Dentistry*

D.M.D., Louisville, 1944

ORTHODONTICS

Nicholas A. Di Salvo. *Professor of Dentistry; Director of the Division*
B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1952

Charles M. Chayes. *Assistant Clinical Professor of Dentistry*
A.B., New York University, 1937; D.D.S., Columbia, 1941

Harold P. Cobin. *Assistant Clinical Professor of Dentistry*
B.S., St. John's University, 1927; D.D.S., Columbia, 1931

Harry A. Galton. *Clinical Professor of Dentistry*
D.D.S., Columbia, 1932

Sidney L. Horowitz. *Assistant Clinical Professor of Dentistry*
B.S., Columbia, 1942; D.D.S., New York University, 1945

Francis J. Loughlin. *Associate Clinical Professor of Dentistry*
D.D.S., New York University, 1939

Joseph Luban. *Assistant Clinical Professor of Dentistry*
B.S., College of the City of New York, 1938; D.D.S., Columbia, 1942

Henry I. Nahoum. *Assistant Clinical Professor of Dentistry*
A.B., Brooklyn, 1940; D.D.S., Columbia, 1943

Armand Oppenheimer. *Associate Clinical Professor of Dentistry*
A.B., College of the City of New York, 1926; B.S., Columbia, 1927; D.D.S., 1929

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B.S., College of the City of New York, 1927; D.D.S., Columbia, 1931

Walter G. Spengeman. *Assistant Clinical Professor of Dentistry*
A.B., Columbia, 1938; D.D.S., Columbia, 1941

Julius Tarshis. *Assistant Clinical Professor of Dentistry*
D.D.S., Pennsylvania, 1949

Edward E. Teltsch. *Assistant Clinical Professor of Dentistry*
A.B., Columbia, 1932; D.D.S., Buffalo, 1936

Clifford L. Whitman. *Clinical Professor of Dentistry*
D.D.S., Maryland, 1927

PATHOLOGY

Donald G. McKay. *Delafield Professor of Pathology; Chairman of the Department*
A.B., California, 1943; M.D., 1945

Lester R. Cahn. *Associate Professor of Oral Pathology*
D.D.S., New York College of Dentistry, 1918

PEDODONTICS

Solomon N. Rosenstein. *Professor of Dentistry; Director of the Division*
B.S., College of the City of New York, 1929; D.D.S., Columbia, 1930

Jerry J. Adelson. *Assistant Clinical Professor of Dentistry*
A.B., Pennsylvania, 1944; D.D.S., New York University, 1951

Julian Schroff. *Assistant Clinical Professor of Dentistry*
B.S., College of the City of New York, 1930; D.D.S., Columbia, 1934

William A. Verlin. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1931

PHARMACOLOGY

Harry B. van Dyke. *David Hosack Professor of Pharmacology; Chairman of the Department*

B.S., Chicago, 1918; Ph.D., 1921; M.D., Rush, 1923

Herbert J. Bartelstone. *Assistant Professor of Pharmacology*

B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1960

Frederick G. Hofmann. *Associate Professor of Pharmacology*

A.B., Michigan, 1943; Ph.D., Harvard, 1952

Wilbur H. Sawyer. *Associate Professor of Pharmacology*

M.D., Harvard, 1945; Ph.D., 1950

Shih-Chun Wang. *Professor of Pharmacology*

B.S., Yenching, 1931; M.D., Peiping Union Medical College, 1935; Ph.D., Northwestern, 1940

PHYSIOLOGY

Magnus I. Gregersen. *John C. Dalton Professor of Physiology; Chairman of the Department*

A.B., Stanford, 1923; M.A., 1924; Ph.D., Harvard, 1930

Shu Chien. *Assistant Professor of Physiology*

M.B., National Taiwan, 1954; Ph.D., Columbia, 1957

Louis J. Cizek. *Associate Professor of Physiology*

B.S., Fordham, 1937; M.D., Columbia, 1941

Robert J. Dellenback. *Assistant Professor of Physiology*

A.B., California (Los Angeles), 1950; M.A., 1953; Ph.D., 1955

Elizabeth C. Gerst. *Assistant Professor of Physiology*

A.B., Mount Holyoke, 1951; Ph.D., Pennsylvania, 1957

Werner R. Loewenstein. *Associate Professor of Physiology*

B.A., Chile, 1945; D.M.D., Chile, 1950

William L. Nastuk. *Professor of Physiology*

B.S., Rutgers, 1939; Ph.D., 1945

Mero Nocenti. *Assistant Professor of Physiology*

A.B., West Virginia, 1951; M.S., 1952; Ph.D., Rutgers, 1955

Walter S. Root. *Professor of Physiology*

B.S., Wesleyan, 1924; Ph.D., Pennsylvania, 1930

William W. Walcott. *Associate Professor of Physiology*

A.B., Yale, 1933; Ph.D., Columbia, 1944

PSYCHIATRY

Lawrence C. Kolb. *Professor of Psychiatry; Chairman of the Department*

M.D., Johns Hopkins, 1934

James P. Cattell. *Assistant Clinical Professor of Psychiatry*

A.B., Miami, 1938; M.D., Harvard, 1942

PUBLIC HEALTH

Ray E. Trussell.* *Joseph R. DeLamar Professor of Administrative Medicine; Associate Dean (Public Health) of the Faculty of Medicine*
A.B., Iowa, 1936; M.D., 1941; M.P.H., Johns Hopkins, 1947

Arthur Bushel. *Adjunct Associate Professor of Dental Public Health Practice*
A.B., Brooklyn, 1940; D.D.S., Columbia, 1943; M.P.H., 1947

Leonard J. Goldwater. *Professor of Occupational Medicine*
A.B., Michigan, 1924; M.D., New York University, 1928; Med.Sc.D., Columbia, 1937; M.S., 1941

Alvin R. Jacobson. *Associate Professor of Sanitary Science*
B.S., North Dakota, 1935; M.S., 1937; Ph.D., Iowa, 1941

George Rosen. *Professor of Public Health Education*
B.S., College of the City of New York, 1930; M.D., Berlin, 1935; Ph.D., Columbia, 1944; M.P.H., 1947

RESTORATIVE DENTISTRY

Gilbert P. Smith. *Professor of Dentistry; Director of the Division; Dean of the Faculty*
D.D.S., Minnesota, 1927

Howard A. Arden. *Associate Professor of Dentistry*
B.S., Fordham, 1943; D.D.S., Columbia, 1946

Herbert D. Ayers, Jr. *Associate Clinical Professor of Dentistry*
A.B., Columbia, 1929; D.D.S., 1931

James W. Benfield. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1945

Sebastian A. Bruno. *Assistant Clinical Professor of Dentistry*
D.M.D., Tufts, 1948

Stanislaw H. Brzustowicz. *Assistant Clinical Professor of Dentistry*
B.S., St. John's, 1940; D.D.S., Columbia, 1943

Edward A. Cain, Jr. *Professor of Dentistry*
B.S., Fordham, 1942; D.D.S., Columbia, 1945

Louis A. Cohn. *Associate Clinical Professor of Dentistry*
D.D.S., Pennsylvania, 1928

Joseph C. De Lisi. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1952

Joseph E. Fiasconaro. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1943

Herbert P. Fritz. *Assistant Clinical Professor of Dentistry*
B.S., New York University, 1933; D.D.S., Columbia, 1936

Robert E. Herlands. *Professor of Dentistry*
A.B., Columbia, 1941; D.D.S., 1944

George W. Hindels. *Associate Clinical Professor of Dentistry*
M.D., Vienna, 1938; D.D.S., Columbia, 1943

Irvin L. Hunt, Jr. *Associate Professor of Dentistry*
D.D.S., Pennsylvania, 1929

* On leave.

- Joseph M. Leavitt. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1940
- George F. Lindig. *Associate Clinical Professor of Dentistry*
D.D.S., Minnesota, 1924
- John J. Lucca. *Associate Professor of Dentistry*
A.B., New York University, 1941; D.D.S., Columbia, 1947
- William Miller. *Assistant Clinical Professor of Dentistry*
B.S., Columbia, 1927; D.D.S., 1931
- William J. Miller. *Associate Clinical Professor of Dentistry*
A.B., New York University, 1940; D.D.S., Columbia, 1943
- Irving J. Naidorf. *Assistant Clinical Professor of Dentistry*
B.A., New York University, 1937; D.D.S., Columbia, 1941
- Max A. Pleasure. *Associate Clinical Professor of Dentistry*
D.D.S., Pennsylvania, 1928; M.S., Columbia, 1941
- Thomas W. Portway. *Assistant Professor of Dentistry*
B.S., Fordham, 1950; D.D.S., Columbia, 1956
- Harold Sherman.* *Assistant Clinical Professor of Dentistry*
B.S., College of the City of New York, 1935; D.D.S., Michigan, 1946
- William H. Silverstein. *Associate Clinical Professor of Dentistry*
D.D.S., Maryland, 1937
- Ennio L. Uccellani. *Assistant Professor of Dentistry*
B.S., College of the City of New York, 1946; D.D.S., Columbia, 1948

STOMATOLOGY

- Edward V. Zegarelli. *Edwin S. Robinson Professor of Dentistry; Director of the Division*
A.B., Columbia, 1934; D.D.S., 1937; M.S., Chicago, 1943
- Frank E. Beube. *Clinical Professor of Dentistry*
L.D.S., D.D.S., Toronto, 1930
- Jack Budowsky. *Associate Clinical Professor of Dentistry*
D.D.S., Columbia, 1943
- Joseph A. Cuttita. *Associate Professor of Dentistry*
A.B., Fordham, 1932; M.S., 1935; D.D.S., Columbia, 1939
- Lewis Fox. *Associate Clinical Professor of Dentistry*
D.D.S., Maryland, 1927
- Ida M. Golomb. *Assistant Clinical Professor of Dentistry*
A.B., New York University, 1938; D.D.S., 1945
- Robert Gottsegen. *Associate Clinical Professor of Dentistry*
A.B., Michigan, 1939; D.D.S., Columbia, 1943
- Leonard Hirschfeld. *Associate Clinical Professor of Dentistry*
A.B., Columbia, 1941; D.D.S., 1944
- Ellen N. Hosiosky. *Assistant Clinical Professor of Dentistry*
D.M.D., Basle, Switzerland, 1935; D.H., Guggenheim Dental Clinic, 1939; D.D.S., Columbia, 1947
- Mortimer Karmioli. *Assistant Clinical Professor of Dentistry*
B.S., College of the City of New York, 1939; D.D.S., Columbia, 1943

* On leave until January 1, 1962.

Austin H. Kutscher. *Assistant Professor of Dentistry*
B.S., New York University, 1945; D.D.S., Columbia, 1946

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B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945

Melvin L. Morris. *Associate Clinical Professor of Dentistry*
B.S., College of the City of New York, 1934; M.A., Columbia, 1937; D.D.S., 1941

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D.M.D., Harvard, 1928

Robert F. Walsh. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1947

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David Blistein, D.D.S.
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 Saul Misheloff, D.D.S.
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 (*Public Health*)
 Arnold C. Rosenberg, D.D.S.

CURATOR OF THE MUSEUM

Curt Proskauer, D.M.D.

LECTURERS

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Solomon L. Katz, D.D.S.
 Hans H. Neumann, M.D.

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Assistant Attending Dental Surgeons: Jack Budowsky, Austin H. Kutscher, Laszlo Schwartz

ORAL SURGERY SERVICE

Attending Dental Surgeon: William J. Savoy

Associate Attending Dental Surgeon: Alvin S. Nathan

Assistant Attending Dental Surgeons: Kourken A. Daglian, Boaz Shattan

OPERATIVE DENTISTRY SERVICE

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Assistant Attending Dental Surgeon: Thomas W. Portway

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Associate Attending Dental Surgeon: Lester R. Cahn

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PERIODONTIA SERVICE

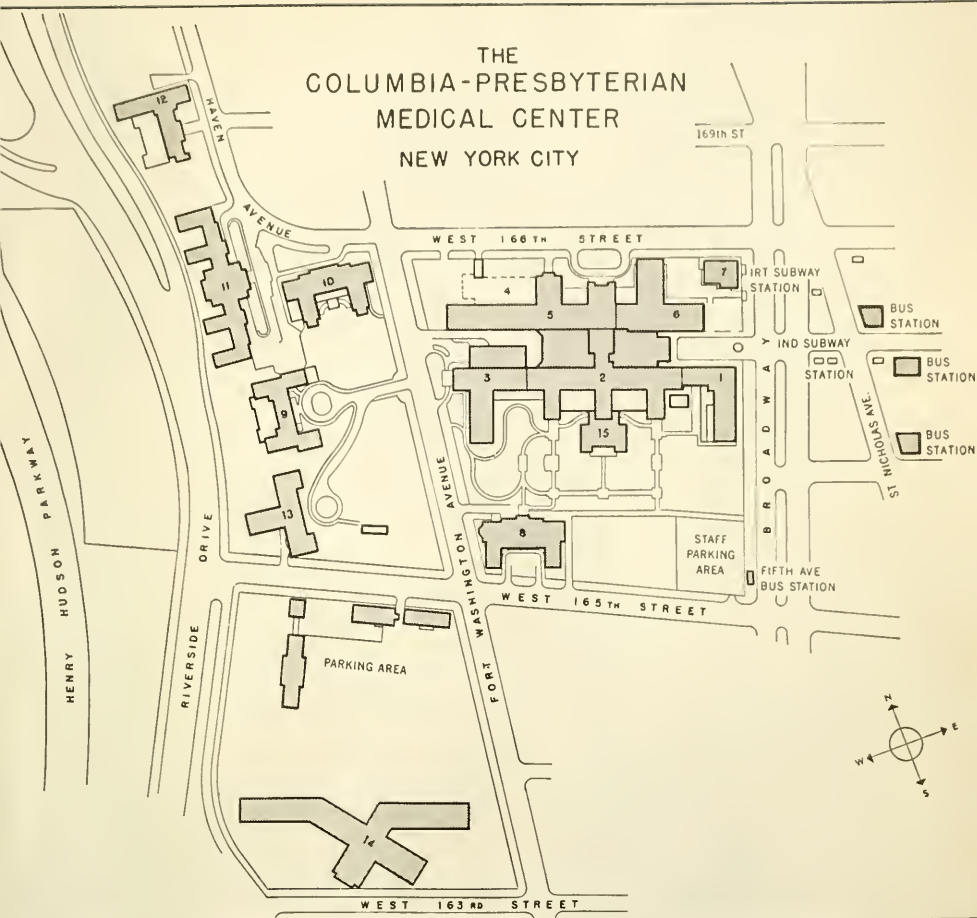
Assistant Attending Dental Surgeon: Frank E. Beube

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